

Kennedy NASA Procedural Requirements

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FACILITIES AND REAL PROPERTY MANAGEMENT PROCEDURAL REQUIREMENTS

**National Aeronautics and
Space Administration**

John F. Kennedy Space Center

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Preface

P.1 PURPOSE

This directive is to define requirements, functions, and procedures; assign responsibilities; and provide definitions and samples of forms for individuals and organizations to utilize in accomplishing their roles in overall management of Kennedy Space Center (KSC) facilities (and the space therein), systems, and equipment.

P.2 APPLICABILITY

This KNPR applies to all KSC organizational elements and covers management functions of KSC facilities and real property with the exception of operating and maintaining facilities,

systems, and equipment; functions performed by the KSC O&M organizations as defined in transition agreements; systems and equipment under the design control of other NASA centers, and program/project-related requirements and plans which are covered in appropriate program/project documents. Also covers NASA Launch Services Program facilities, systems, and equipment, to the extent that it does not conflict with existing KSC agreements with other centers and/or Government agencies.

P.3 AUTHORITY

- a. NPR 8800.15 (as revised), Policy for Real Property Management
- b. NPR 8800.15 (as revised), Real Estate Management Program Implementation Manual

P.4 APPENDICES

- a. Appendix A, Acronyms and Abbreviations
- b. Appendix B, Requirements for Preparation of Engineering Support Requests (ESR) (KSC Form 21-319)
- c. Appendix C, Requirements for Preparation of KSC Engineering Assessment KSC Form 21-146)
- d. Appendix D, Requirements for Preparation of Configuration Control Board Directives (CCBD) (KSC Form 2-122)
- e. Appendix E, Requirements for Preparation of Turnover of Operations and Maintenance Responsibility for KSC Facilities, Systems, and Collateral Equipment (KSC Form 21-136)
- f. Appendix F, Requirements for Preparation of Transfer and/or Notification of Acceptance of Accountability of Real Property (NASA Form 1046)
- g. Appendix G, Space Classification Code Summary and Definitions

P.5 REFERENCES

- c. Code of Federal Regulations (CFR), 14 CFR 1204.503, Administrative Authority and Policy, "Delegation of Authority to Grant Easements"
- d. Code of Federal Regulations (CFR), 14 CFR 1204.504, Administrative Authority and Policy, "Delegation of Authority to Grant Leases, Permits, and Licenses in Real Property"
- e. FMM 9250, Property Accounting
- f. NPD 1387.1 (as revised), NASA Exhibits Program
- g. NPD 9050.6 (as revised), NASA Exchange Activities
- h. NPR 4200.1 (as revised), NASA Equipment Management Manual
- i. NPR 4300.1 (as revised), NASA Personal Property Disposal Procedural Requirements
- j. NPR 7120.5 (as revised), NASA Program and Project Management Process and Requirements
- k. NPR 8800.15 (as revised), Policy for Real Property Management
- l. NPR 8820.2 (as revised), Facility Project Implementation Handbook
- m. NPD 9050.6 (as revised), NASA Exchange Activities
- n. KHB 4000.1 (as revised), Supply Support System Manual
- o. KHB 5310.1 (as revised), Reliability, Maintainability and Quality Assurance Handbook
- p. KHB 6000.1 (as revised), Transportation Support System Handbook

- q. KHB 8800.6 (as revised), KSC Environmental Control Handbook
- r. KSC-DF-107 (as revised), DE Technical Documentation Style Guide
- s. KSC-SPEC-F-0009 (as revised), Design, Fabrication and Erection of Signs at John F. Kennedy Space Center
- t. KSC-STD-P-0001 (as revised), Standard for the Preparation of Equipment Procurement/Performance Specifications
- u. GP-435 (as revised), Engineering Drawing Practices
- v. KDP-KSC-P-1537 (as revised), Document Release Authorization (DRA) Process
- w. 79K09579, STS/Cargo Facilities, Systems and Equipment Organizational Level OMD Baseline
- x. Johnson Space Center (JSC); SL-T-0010, Time Compliance Technical Instruction (TCTI)
- y. Johnson Space Center (JSC); SN-S-0008, Software Deliverable Data Package Requirements Specification

P.5 CANCELLATION or SUPERSESSION

This document cancels and supersedes KHB 1200.1, Facilities and Real Property Management Handbook

P.6 DEFINITIONS

ACQUISITION - Includes acquiring facilities, systems, and/or equipment by purchase, lease, and by transfer from contractor plants, other NASA installations, or other Government agencies.

AREA DESIGNATION, ALLOCATION, AND ASSIGNMENT - The functional step in overall master planning when such requirements as area easements, outleases, permits, contractor work areas, recreation areas, parks, clearance zones, buffer zones, refuges, drainage districts, fire breaks, landscaping, borrow areas, and viewing areas are incorporated and integrated into the KSC Master Plan.

ARTIFACT - Unique specimens relating to the science and technology of aeronautics and astronautics and of flight in the atmosphere and space, including, but not limited to, spacecraft (both manned and unmanned), subsystems of the above, such as rocket engines, pressure suits, personal equipment, instruments, significant recorded data, operating handbooks, photographs, motion picture and still camera film, sound tapes, training devices, simulators, and memorabilia.

BORROW AREAS - See ON-BASE BORROW AREAS.

CANNIBALIZATION - The removal of serviceable parts, components or assemblies from one piece of equipment/facility to be used as replacement in another equipment/facility or to fabricate another item.

CATEGORY I - See MANDATORY CHANGES.

CATEGORY II - See HIGHLY DESIRABLE CHANGES.

CHANGE REQUIREMENTS - See REQUIREMENTS.

COLLATERAL EQUIPMENT - Encompasses building-type equipment, built-in equipment and large substantially affixed equipment/property, and is normally acquired and installed as a part of a facility project.

- Building Type Equipment - That equipment which is normally required to make a facility useful and operable. It is built in or affixed to the facility in such a manner that removal would impair the usefulness, safety or environment of the facility. Such equipment includes elevators; heating, ventilating and air conditioning systems, transformers; compressors and other like items generally accepted as being an inherent part of a building or structure and essential to its utility. It also includes general building systems and subsystems such as electrical, plumbing, pneumatic, fire protection, and control and monitoring systems.
- Built-In or Large Substantially Affixed Equipment/Property - That unit of equipment or property of any type other than building-type equipment which is to be built-in, affixed to or installed in real property in such a manner that the installation cost, including special foundations or unique utilities service, or the facility restoration work required after its removal is substantial.

CONSTRUCTION FACILITY PROJECT - See FACILITY PROJECT.

CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) - Appointed by the contracting officer in writing, with specific authority defined, for a construction or maintenance-type contract, to serve as the Contracting Officer's representative responsible for ensuring that the Contractor complies with the technical requirements of the contract, is the engineering technical representative for the administration and liaison of the contract work.

CONTROLLED EQUIPMENT - All capital equipment and selected items of non-capital equipment designated as sensitive for which custodial responsibility has been established and for which detailed property records are maintained.

DEVIATION - A specific authorization granted before the fact to use an article or perform an action that does not meet specified requirements. Requirements will normally be defined in contracts, technical specifications, drawings, and/or NASA policy documents.

DISCREPANCY/NONCONFORMANCE - A condition of any hardware or software in which one or more characteristics do not conform to the specified requirements.

DISPOSAL - The actual sale, abandonment, destruction, or transfer of surplus property.

DOWNMODING - Placing the facility required in the future in a standby condition. No services such as power, air conditioning or water are required, except those services necessary to prevent uneconomical deterioration of facilities, contents, and systems.

EMERGENCY REPAIR - The restoration of an existing facility or the components thereof when such facilities or components have become inoperative due to major breakdown, accident or other circumstances, which could not be anticipated in normal operations, and

when their repair is of such urgency that it cannot wait for programming and accomplishment in the normal budget cycle. In the process of "emergency repairs," the replacement of components or materials will be of the size or character currently required to meet firm demands or needs.

ENGINEERING SUPPORT REQUEST - The document to be used by all KSC organizations to request design action on all proposed changes to KSC facilities, systems, and equipment design requirements. See Appendix C for preparation requirements.

EQUIPMENT - An item of real or personal property in the configuration of a mechanical, electrical or electronic apparatus or tool, normally costing in excess of \$50, which may perform a function independently or in conjunction with other equipment or components. In this document, unless otherwise stated, the word, "equipment" means "capital equipment" defined as follows: All items of equipment with an acquisition cost of \$500 or more, that have an estimated service life of one year or more, which will not be consumed in an experiment, and which can be identified as an independently operable item; i.e., it need not be integrated into another item in order to be operable.

EQUIVALENCY LIST - A list of approved items having characteristics equal to or better than the KSC-specified part, thus conforming to pertinent KSC specifications, standards, and design criteria.

EXHIBIT - An article or articles relating to the science and technology of aeronautics and astronautics, prepared for viewing by and education of the general public.

FACILITY - A term used to encompass land, buildings, or other structures, and real property improvements, including utilities and collateral equipment.

FACILITY MASTER PLAN - A document providing a narrative, statistical, and graphic record of existing property, buildings, structures, and other improvements. It also provides a report on the installation's facilities potential and of planned development as far into the future as current analysis and program plans will allow. It is designated to ensure the most efficient and economical use of real property resources and will provide a basis for cooperative planning with local communities, regional functions, and other government agencies. In addition, it provides the basic point of reference for review and approval of specific projects as part of the normal budget formulation and execution process.

FACILITY PROJECT - The consolidation of applicable, specific, individual types of facility work, including related collateral equipment, which is required to fully reflect all of the needs, generally relating to one facility, which have been or may be generated by the same set of events or circumstances and which are required to be accomplished at one time in order to provide for the planned initial operational use of the facility or a discrete portion thereof and whose cost exceeds \$2,000. Types of facility projects are:

- Purchase of Land - The acquisition of land by the Government for a monetary consideration.
- Construction - The erection, installation, or assembly of a new facility, a replacement facility, or an addition in area or volume to an existing facility.

- Rehabilitation - The restoration of a facility or the components thereof to a condition such that the facility may be effectively used for its designated purpose. In the process of rehabilitation, the replacement of components or materials need not be of the same size or character as those moved, but will be selected to meet current firm demands or needs.
- Modification - The work required to change, adjust, or modernize an existing facility, so that it can be more effectively adapted or used for its designated purpose.

NOTE: Facility project modification exclusions are GSE and movable/relocatable partitions, which are not a part of the building structure (built in) and are not included in the definition of collateral equipment, as defined on Page A-1. These types of partitions are non-collateral equipment and changes to them are considered rearrangements and do not require facility project approval. Painting and minor changes to utility services, e.g., telephones, electrical, and air conditioning outlets, when required to accomplish effective office partition rearrangement do not require facility project approval.

FACILITY SIGN - Any free-standing or building-mounted display of lettering, symbols or other indication of the identity, use or occupancy of a building, structure or area.

HARDWARE SUBSTITUTION - The approved usage of an item that is not designated by the design documentation and is not on the KSC Equivalency List but can be used in place of the designated items.

HIGHLY DESIRABLE CHANGES - A category assigned to changes for any of the following reasons:

- To effect a change in operational characteristics which may, if not accomplished expeditiously, seriously compromise the mission.
- To correct a potentially hazardous condition, this if uncorrected could result in injury to personnel or damage to equipment.
- To meet significant operational requirements, (e.g., when lead time will necessitate slipping approved production, activation, or construction if change is not incorporated).
- To accomplish a change requirement, which, if delayed, would cause a schedule slippage or increase costs.
- To effect a change that will result in substantial reduction in costs and/or flow items.
- Other required change requirements.

INTERIM TURNOVER - Occurs when the facility, system, equipment, and/or documentation has not been completed to the point that normal operations can be performed, but maintenance by the O&M is required to prevent deterioration until corrective action can be taken to make it acceptable for operations and final turnover.

KSC REAL PROPERTY - Includes land and, generally, whatever is erected upon or affixed to the land; providing the items erected upon or affixed to land have an estimated useful life of at least one year and have a cost exceeding \$5,000. Real property is further identified as follows:

- Land - Includes all acquired interests in land, e.g., owned, leased, or acquired by permit, but excludes NASA-controlled easements and rights-of-way, which are under leasehold improvements.
- Buildings - Includes buildings owned or leased by or on behalf of NASA and improvements to NASA-owned buildings and installed property, but excludes leasehold improvements.
- Other Structures and Facilities - Includes all structures and facilities and installed property owned or leased by or on behalf of NASA; e.g., storage tanks, gantry cranes, launch pads, blockhouses, service towers, airfield pavements, roads and bridges, railroads, monuments, sidewalks, parking areas, and fences, but excludes leasehold improvements.
- Leasehold Improvements - Includes improvements made by or on behalf of NASA to lease land, buildings, other structures and facilities, easements, and rights-of-way.
- Installed Property - Items of fixtures and equipment normally required for the functional use of the building or structure, the removal of which would impair the usefulness, comfort, or safety of the building or structure will be considered installed property items to be included as part of the building or structure and accounted for accordingly. Examples of installed property items to be included as real property are: plumbing fixtures and equipment; fixed heating, ventilating, cooling, central air conditioning, electrical and fixed fire protection systems; escalators, overhead crane runways, components which become part of a system, and other similar built-in or permanently affixed items.
- Relocatable buildings shall be accounted for as real property, except for nonrigid structures such as tents and inflatables, which shall be accounted for as personal property.

LABORATORY SPACE - Physical space which has been specifically constructed and equipped for testing, research, and experimentation.

LAUNCH COMPLEX TECHNICAL AREAS

Launch Complex 39 - All areas including the pad areas, the technical structures such as the VAB high and low bay areas, the mobile launchers, the docks and related equipment, the 115 KV substation, the CCF pad areas, the crawlerway, the waterway, the barges and associated equipment required for transfer and loading vehicles (which are vehicle peculiar), the LCC firing rooms and associated equipment areas, and the Space Shuttle orbiter landing facilities.

Test Areas - The O&M building test (mission) area and other KSC industrial area test (mission) areas. **NOTE:** Additional areas may be defined as launch complex technical areas at a later date.

MAINTENANCE - That broad range of activities involved in the day-to-day facilities work required to keep buildings, structures, grounds, utility systems, and collateral equipment in an effective, usable or working condition to include scheduled preventive maintenance measures. This work is not required to be projected as facility projects.

MANDATORY CHANGES - A category assigned to change requirements when one or more of the following conditions exist:

- A hazardous condition exists which could cause fatal or serious injury to personnel or extensive damage or destruction of equipment.
- A system required to support a critical test or launch is inoperable.
- A change in organization characteristics develops which, if not promptly accomplished, may seriously delay the program.

MASTER PLAN - SEE FACILITY MASTER PLAN.

MASTER PLANNING APPROVAL - The written approval, by memorandum or certificate, of the use or projected use of property. This approval may be specific and explicit, or conceptual and general. It need not establish a specific site approval when approving an idea or concept.

MODIFICATION FACILITY PROJECT - See FACILITY PROJECT.

MODIFICATION PACKAGE (MP) - A package containing all of the documentation, instructions, and planning information necessary for implementation of a requirement.

NEW REQUIREMENTS - See REQUIREMENTS.

NOT IN CONTRACT (NIC) - Items outside the scope or intent of a particular design or construction/fabrication/installation contract.

OFFICE SPACE - Areas that have a primary function to provide physical space for desk-type operations.

ON BASE BORROW AREAS - Approved sites under KSC control from which earth fill is removed for use elsewhere in the area.

PHYSICAL SPACE - All office buildings, storage facilities, trailers, special purpose buildings, launch areas, laboratories, checkout facilities, and all other areas of space owned or controlled by KSC, wherever located.

PROBLEM - A nonconformance fitting or suspected of fitting one of the following conditions:

- Failure or unsatisfactory condition occurring during or subsequent to production acceptance testing.
- Failure of unsatisfactory condition which occurs prior to acceptance testing that will, or has the potential to, adversely affect safety, contribute to schedule impact or launch delay, or result in a design change.

PROBLEM REPORTING - A method for identifying, reporting, analyzing, remedying, and preventing recurrence of hardware and software problems.

PROGRAM/PROJECT MANAGER - As used in this handbook, includes not only managers of specific programs/projects such as the Space Shuttle Program but also the institutional program.

PUBLIC SPACE - Corridors, lobbies, stairways, elevator shafts, and restaurants.

PURCHASE OF LAND FACILITY PROJECT - See FACILITY PROJECT.

QUANTITY/DISTANCE SITE PLAN - The written approval, by memorandum or certificate, of the maximum quantity of hazardous material permitted at any locations, and the minimum safety clearance distance necessary on the site.

REAL PROPERTY - See KSC REAL PROPERTY.

REHABILITATION FACILITY PROJECT - See FACILITY PROJECT.

REMEDIAL ACTION - Interim action taken to correct a nonconforming system, article or material.

NOTE: Remedial action may also be the final action.

REPAIR - That facility work required to restore a facility or component thereof, including collateral equipment, to a condition substantially equivalent to its originally intended and designed capacity, efficiency, or capability. It includes the substantially equivalent replacement of utility systems and collateral equipment necessitated by incipient or actual breakdown, and consideration of associated obsolescence. The extent of nature of this work includes preventive maintenance measures, which are normally accomplished on a cyclic schedule of greater than one year (See Note).

This work is required to be projected as a facility project if the estimated cost of the work required is in excess of \$2,000.

NOTE: Landscaping, surface patching and protective coating that are accomplished on a cyclic schedule of greater for more than one year are excluded and are defined as maintenance. Examples are: caulking, resealing and painting, patching, slurry coating and patching of roads, curbs and sidewalks, flashing and restoration of roofs. Questionable cases should be referred to the Engineering Development Directorate for resolution.

REPLACEMENT OF LIKE ITEM REQUIREMENT - See REQUIREMENTS

RESPONSIBLE DESIGN ORGANIZATION - The KSC organization that has been assigned the development or sustaining engineering authority for the facility, system or equipment involved.

REQUIREMENT - Requirements, as used in this handbook, are defined as follows:

- Change Requirements - Established needs for modifications to existing facilities, systems, and equipment.
- New Requirements - Established needs for new facilities, systems, and equipment.
- Replacement of Like Item Requirements - Established needs for replacement of like items to maintain existing capabilities. The word "requirements," as used in this

handbook represents all types of requirements defined above, unless otherwise specified.

SIGNIFICANT ENVIRONMENTAL EFFECTS - Those effects which result from physical and/or from the presence of chemical, physical, or biological agents in the air, water, or soil which so alter the natural environment that an effect is created on human health or comfort, on sustaining animal or plant life, or structures and equipment to the extent of producing economic loss, impairing recreational opportunity, or marring natural beauty.

SITE APPROVAL - The written approval, by memorandum or certificate, of the use of a facility or property which is specific in its authority and which pertains only to that property or facility.

SPACE UTILIZATION - Control of physical space, including establishing policies and standards, assignments and releases. This includes control of the location within approved sitings, as well as assignment of all trailers.

SPACE FLIGHT, CONTROL AND DATA COMMUNICATIONS - The Space Flight, Control and Data Communications program is to provide for the operational activities of the Space Transportation System and tracking and communication system support to all NASA flight projects.

SPECIAL PURPOSE SPACE - Bulk storage areas; general warehousing areas; operational areas; machine shops; schedule rooms; documentation rooms; communication, mechanical, electrical, and air conditioning rooms; computer rooms; control rooms; and/or other physical space and areas not specifically identified as office, laboratory, or public space.

STRIPPING - The removal of items where there is no known or planned use for the facility, system, or equipment utilizing the items being removed.

SYSTEM - One or more equipment items and their interconnecting elements servicing a common purpose.

TECHNICAL (ENGINEERING) ASSESSMENT - The technical assessment is reviewing a requirement and arriving at a method of satisfying the requirement which is in the best interest of the Government. The assessment includes:

- Determining the impact on operations (facilities, system, equipment, schedules, manpower, and other centers and their contractors).
- Determining the most efficient method of satisfying the requirement.
- Establishing the estimated cost of satisfying the requirement. Determining the funding, approvals, and documentation required.

TENANT ORGANIZATIONS - All organizations, both civil service and contractor, who report directly to another NASA center, DOD command, or other Government agency, but require space and services in or on NASA/KSC-controlled or owned facilities.

UNIQUE EQUIPMENT REGISTER (UER) - A collection of indexed data of NASA equipment that is generally specialized and not commercially available.

USING ACTIVITY - Can be an individual, a group, an office, a division, a center, an outside activity, or a combination of any of these having a need for land or facilities in areas under the control of KSC, or having a requirement for land or facilities on Range Stations, such as CCAFS.

WAIVER - Granted approval after the fact to use an article or perform an action that does not meet specified requirements.

P.8 FORMS

- a. Department of Defense, DD Form 1149, Requisition and Invoice/Shipping Documents
- b. Department of Defense, DD Form 1354, Transfer and Acceptance of Military Real Property
- c. KSC Form 1-4, Request for Issuance Clearance
- d. KSC Form 2-122, Configuration Control Board Directive
- e. KSC Form 2-130, KSC Change Evaluation
- f. KSC Form 2-131, Document Continuation Sheet
- g. KSC Form 2-151, Nonconformance Problem Report
- h. KSC Form 7-49, Purchase Request
- i. KSC Form 14-119, Implementation Notification Certificate
- j. KSC Form 19-15, Support Request
- k. KSC Form 19-33, Procurement Request
- l. KSC Form 21-68, Document Release Authorization
- m. KSC Form 21-122, Engineering Instruction
- n. KSC Form 21-136, Turnover of O&M and/or Sustaining Engineering Responsibility for KSC Facilities, Systems, and Collateral Equipment
- o. KSC Form 21-146, Engineering Assessment
- p. KSC Form 21-319, Engineering Support Request
- q. NASA Form 844, Real Property Record – Land
- r. NASA Form 845, Real Property Record – Building
- s. NASA Form 846, Real Property Record – Other
- t. NASA Form 847, Real Property Record - Leasehold Improvements
- u. NASA Form 1045, Real Property Transaction Voucher
- v. NASA Form 1046, Transfer and/or Notification of Acceptance of Accountability of Real Property
- w. NASA Form 1134, Instructions and Real Property Codes
- x. NASA Form 1509, Facility Project-Brief Project Document
- y. NASA Form 1510, Facility Project Cost Estimate

P.9 ILLUSTRATIONS

- a. Figure 14-1, Numbering of Buildings
- b. Figure 14-2, Numbering of Trailers

Scott Kerr

Director of Spaceport Services

PROCEDURES

Chapter 1. INTRODUCTION

1.1 PURPOSE

These procedures establish the requirements and assigns responsibilities for the development and implementation of management controls on facilities, systems, equipment, and physical space at the John F. Kennedy Space Center, excluding the management of KSC office, word processing, printing, reproduction, copying, micrographics equipment, and furniture.

1.2 SCOPE AND APPLICABILITY

These procedural requirements apply to all KSC organizational elements and to NASA/KSC contractors in accordance with the provisions of their respective contracts. It covers management functions of KSC facilities, systems, equipment, and physical space. This KNPR does not cover systems and equipment under the design control of other NASA centers. It covers NASA Launch Services Program facilities and equipment only to the extent that it does not conflict with existing KSC agreements.

1.3 REQUIREMENT

It is a KSC requirement that management of KSC facilities, systems, equipment, and physical space be accomplished in an efficient and economical manner that eliminating overlaps or voids in the functions.

1.4 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for KSC Comprehensive Master Planning, the KSC Construction of Facilities (CofF) program, land management planning, historic and archaeological preservation, and for the planning, development, design, design review process, acquisition, allocation, modification, activation, and rehabilitation of KSC facilities, systems, equipment, and physical space not under the sustaining engineering responsibilities of others.
- b. Program/Project Managers are responsible for developing, defining, approving, and issuing program/project-related requirements and plans for facilities, systems, and equipment in accordance with the requirements specified herein. Program/project managers are also responsible for:
 - (1) Concurring in directorate-level program/project implementing plans and procedures.
 - (2) Interfacing with other organizations of NASA, Government, and industry on program/project matters.

- (3) Developing or approving program/project management intercenter subagreements.
 - (4) Reviewing and concurring in intercenter/ Government agency subagreements.
 - (5) Assessing the effectiveness of program/project management subagreements.
 - (6) Providing funding controls, milestone schedules, and control for program/project activities.
- c. The Directors of Spaceport Services, International Space Station/Payload Processing, and Shuttle Processing are responsible for sustaining engineering of KSC facilities, systems, and equipment under their management authority, and are responsible for developing, implementing, and managing effective control systems to assure that changes to facilities, systems, and equipment are made at specifically scheduled times, or milestone dates, and only after approval by the appropriate Configuration Control Board(s). Heads of primary organizations are responsible for:
- (1) Preparing, or assuring preparation for, implementation procedures, as necessary, in accordance with the program/project management plans and this Handbook.
 - (2) Utilizing physical space assigned to their organizations efficiently; meeting the overall KSC space allocation goals; and reporting all anticipated shortages or overages to Spaceport Services as soon as possible.
 - (3) Providing inputs through the appropriate budget calls for facilities, systems, and equipment required to perform their missions.
 - (4) Budgeting, acquiring, utilizing, and disposing of all equipment utilized by them and by their contractors.
- d. KSC Institutional Safety & Quality Branch is responsible for recommending facility additions or modifications to enhance the risk posture, and for reviewing all sitings of KSC facilities to assure compliance with explosive safety standards.
- e. The Director of Safety, Health, and Independent Assessment is responsible for establishing safety, reliability, maintainability, and quality assurance (S&MA) policy, assessing conformance of related documents implementing S&MA.
- f. Contract Managers of Joint Base Operations, Checkout, Assembly and Payload Processing (CAPPS), and Space Flight Operations Contracts are responsible for assuring their contracts require the following to be accomplished:
- (1) Maintaining configuration management for the configured facilities, systems, and equipment assigned to their contracts.
 - (2) Coordinating with the Spaceport Services Directorate on items affecting the KSC Master Plan, Land Management Plan, environment, floodplain and waterway restrictions, and agreements with the Department of the Interior or other agencies.

- (3) Providing for inputs through the appropriate budget calls, for facilities, systems, and equipment that are outside the responsibility of the contracts or their directorates.
- (4) Managing of KSC facilities, systems, equipment, and physical space which have been assigned to the contractor for management, and, specifically, for sustaining engineering, modification, repair, and rehabilitation, and for approved new acquisitions. As a minimum, this management responsibility shall comply with the applicable requirements of this document.

Chapter 2. REAL PROPERTY MANAGEMENT

2.1 PURPOSE

This chapter defines requirements and assigns responsibilities for the management of real property at KSC.

2.2 SCOPE AND APPLICABILITY

This chapter covers the management of all KSC real property, except for physical space management, which is covered by Chapter 12.

This chapter applies to all KSC organizational elements, to their associated contractors to the extent specified in their contracts, and tenants at KSC (other NASA installations, other government agencies, and private organizations). It does not apply to the Department of the Interior (U.S. Fish and Wildlife Service and the National Park Service).

2.3 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for the configuration of all KSC real property.
- b. Heads of operations and maintenance (O&M) organizations through their self-supporting contractors (Joint Base Operations, Shuttle Processing, and CAPPS) are responsible for:
 - (1) Assisting the Director of Spaceport Services in the management of KSC real property, as delineated in the individual chapters of this Handbook and their respective contracts.
 - (2) Performing O&M functions and other functions as defined in KSC management documents, transition agreements, and/or contracts.
 - (3) Approving the lease of offsite facilities (for over 30 days) for onsite contractors and obtaining approval from NASA Headquarters in accordance with NPR 8800.15 and NPR 8400 for the purchase or lease of trailer units.
- c. The KSC program/project managers are responsible for:
 - (1) Approving all new requirements for real property.

- (2) Validating existing requirements for real property when presented by Spaceport Services.

2.4 GENERAL PROVISIONS

- a. The official real property records required for real property management are maintained by the JBOSC contractor and managed by the Real Property Accountable Officer, NASA AF Management & Comprehensive Master Planning Office, Spaceport Services. At a minimum, the records will contain the following information for all real property:
 - (1) Identification
 - (2) Description
 - (3) Cost
 - (4) Quantity
 - (5) Location
 - (6) Life of Requirement
- b. The Space Utilization Records (Facility Center), maintained in accordance with Chapter 12, will be managed by NASA AF Management & Comprehensive Master Planning Office, Spaceport Services.
- c. All new requirements for real property, including relocatable buildings (ref. NPR 8800.15), will be screened against the real property records to determine if the requirement can be met with existing, available real property prior to acquiring new real property.
- d. All existing requirements for real properties, including relocatable buildings, are to be reviewed at least once annually to determine if the requirement is still valid. If the requirement is no longer valid, down-moding, phasedown, or disposal shall be accomplished.
- e. All real property turned in shall be checked against proposed or validated new requirements for possible usage. If no requirement exists, down-moding, phasedown, or disposal shall be accomplished in accordance with approved phasedown plans.
- f. At least once every 3 years, a physical inventory will be taken of all real property. The inventory will be taken on a cycle basis, scheduled in such a manner that the complete inventory will be accomplished every 3 years. The physical inventory will be performed in accordance with the requirements of NPR 8800.15.
- g. Upon acceptance of the real property, or the work performed by a contractor or NASA personnel, the NASA representative responsible for monitoring the acquisition or improvement will, within 30 calendar days, complete and forward NASA Form 1046 to the Real Property Accountable Officer.

- h. Actions affecting the disposition of KSC real property (buildings & grounds) shall be appropriately coordinated with the Protective Services Branch, Spaceport Services, to assure adequate protective measures.

2.5 FACILITY PROJECT

- a. All facility projects to be implemented on property owned or controlled by the U.S. Government for which KSC has responsibility shall be properly approved prior to execution. This applies:
 - (1) Regardless of source of funds.
 - (2) Regardless of implementing method, organization, or agent, whether Government or private.
- b. KSC organizations proposing facility projects will normally submit their proposals in the Construction of Facilities (Norman, Raymond M Coff), Research and Operations Support (ROS), and Program Mission Support (PMS) budgets per Chapter 4. Requirements not identified during the budget process and planned non-appropriated funded projects will be submitted, at the earliest possible date, in accordance with Chapter 11.
- c. When required, a Facility Project-Brief Project Document (NASA Form 1509) and a Facility Project Cost Estimate (NASA Form 1510) shall be completed in accordance with NPR 8820.2.
- d. The Director, Procurement Office, will approve/disapprove NASA Exchange related facility projects within KSC authority in accordance with NPD 9050.6. Projects not within Center authority will be forwarded by the Director of Spaceport Services to NASA Headquarters for approval action.
- e. Tenants at KSC (other NASA elements, other Government agencies, and private organizations) proposing a facility project on KSC-controlled real property must have the work covered by an appropriate, properly documented Facility Project - Brief Project Document (NASA Form 1509) and must have the approval of the Director of Spaceport Services prior to construction award.

2.6 REPAIR

- a. Facility repair work, to be carried out either by itself or as a portion of a combined "maintenance and repair" work effort, will be documented and administered as a facility project in accordance with paragraph 11.4, when estimated cost is between \$50,000 and \$500,000.
- b. Repair projects whose total estimated cost of the repair work involved is not greater than \$500,000 shall be documented and administered by the responsible O&M directorate, and where applicable, tenants or agencies, in accordance with the following:
 - (1) A project approval document (NASA Form 1509) containing the following shall be prepared:

- (a) A description of the repair work, including identifying its location (scope/description).
- (b) The necessity for the repair (basis of need).
- (c) The estimated cost, broken down by labor, equipment, materials, and other.
- (d) The repair project document shall be submitted to Spaceport Services for approval prior to construction award.
- (e) Repair projects whose total estimated cost is greater than \$500,000 shall be submitted to the Chief of the Facilities Division, Spaceport Services Directorate, and must be requested during the annual POP for Construction of Facilities program requirements.

NOTE: Facility repair projects should be handled the same as facility projects.

- (f) A copy of the approval document shall be forwarded to the responsible O&M organization, tenant or agency, so they may initiate repair work.

Chapter 3. MASTER PLANNING

3.1 PURPOSE

This chapter defines the requirements and assigns responsibilities for the development and maintenance of a Facilities Master Plan for KSC facilities.

3.2 SCOPE AND APPLICABILITY

- a. This chapter covers the master planning of KSC facilities. The principles of master planning and the control and format of the Master Plan are detailed in Chapter 3 of NPR 8820.2. Provisions of this chapter in conformance with NPR 8800.15 shall manage the initiation and administration of planning and use of areas defined as floodplain and wetlands. All existing and future installations, regardless of size and type of project or source and amount of funding, are included.
- b. This chapter applies to KSC organizational elements; to other Government organizational tenants on KSC; and to KSC and other NASA contractors, in accordance with the provisions of their respective contracts, which will require compliance.
- c. The following facilities are specifically excluded from the scope of this section:
 - (1) Planning for non-hazardous portable facilities, such as skid-mounted tool sheds.

NOTE: Portable facilities lose their excluded status when fitted with permanent foundations or utilities, and are then covered by this chapter.

- (2) The 45th Space Wing (45th SW) facilities used or occupied by KSC are the master planning responsibility of the 45th SW. Copies of master plans are exchanged between KSC and the 45th SW to ensure compatibility of the plans.

3.3 OBJECTIVES

The Facilities Master Plan for KSC is intended to provide a narrative, statistical, and graphic record of existing real property, buildings, structures, and other improvements. In addition, the plan will provide a report on the potential development of the installation, facilities, and/or planned development, as far into the future as current analysis and program plans will allow. The plan is intended to ensure the most efficient and economical use of KSC controlled real property; to provide a basis for cooperative planning with local communities and regional, State, and other governmental agencies. Further, the plan and the review and concurrence during planning cycles shall assure that NPR 8800.15 in conformance with standards establishes the use of floodplain and wetlands; and that other environmental control measures are maintained. The Facilities Master Plan is the basic point of reference for review and approval of specific projects as a part of the normal budget formulation and execution process.

3.4 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for land management matters and managing the KSC Facility Master Plan and Land Use Plans as shown below:
 - (1) Preparing and updating the Facilities Master Plan.
 - (2) Briefing the KSC Senior Management on the contents of the Facilities Master Plan when significant revisions are made, when requested, or as otherwise appropriate.
 - (3) Reviewing all proposed requirements for KSC facilities for impact on the Facilities Master Plan.
 - (4) Making primary area designations, allocations, and assignments.
 - (5) Providing master planning capability for the review of excavation permits as required by KMI 8810.1 and KHB 8810.1.
 - (6) Consulting with other KSC organizations, including Program and Project Managers and NASA Headquarters, relative to facility names at KSC, and recording NASA approved facility names in the Facilities Master Plan.
 - (7) Assuring that Facilities Master Plan data and real property records are compatible.
 - (8) Submitting the Facilities Master Plan to NASA Headquarters, for review and validation, at approximately 3-year intervals.
 - (9) Submitting two copies of the Facilities Master Plan and each revision to NASA Headquarters.

- (10) Providing the 45th SW with two copies of the Facilities Master Plan.
 - (11) Establishing Quantity/Distance Site Plans in coordination with the appropriate Safety and Mission Assurance (S&MA), Security, and/or fire protection organizations, which certify the maximum quantity of hazardous material, permitted at any location and the corresponding safety clearance distance necessary at the site.
 - (12) Evaluating proposed sites, or changes to existing sitings, to determine whether floodplains or wetlands are affected.
 - (13) Maintaining coordination with other Government agencies and KSC directorates in the management of the floodplains and wetlands.
 - (14) Providing survey data for legal descriptions, leases, and easements.
 - (15) Coordinating land management matters with the Department of the Interior Wildlife Refuge Manager and other agencies.
 - (16) Coordinating historic and archaeological preservation and consultation matters with the State Historic Preservation Officer and National Advisory Council on Historic Preservation.
- b. The heads of using activities (including the Director of Spaceport Services) are responsible for submitting projected facilities requirements for development of the Construction of Facilities (CofF) budget.
 - c. The Director of Safety Health & Independent Assessment is responsible for assuring that the maximum quantity of hazardous material permitted at any location, and the corresponding safety clearances for proposed sites or changes to existing sitings, are established and are acceptable from a safety viewpoint.

3.5 GENERAL PROVISIONS

- a. Master Planning shall be part of the engineering assessment of proposed requirements for KSC facilities. As part of the engineering assessment, the proposed requirement shall be checked against the Facilities Master Plan. All impacts on the Facilities Master Plan shall be stated in the engineering assessment. All future master planning and siting actions, if proposed requirements are approved, shall also be stated in the engineering assessment, with time for completion, including any outside KSC coordination required, such as the 45th SW.
- b. Master planning and siting are required prior to relocating, extending, or modifying by increasing the dimensions or capacity of an existing KSC facility; changing the hazard conditions or hazard potential of an existing KSC facility or operation; or constructing a new facility on KSC or the 45th SW.
- c. Items to be considered in master planning siting are: zoning, present and future missions; terrain; utilities; transportation (public road, parking, railroad, bus, canal); landscaping; road clearances (building setback, drainage, utilities obstruction, traffic sight-distance versus speed); fire protection and prevention; line-of-sight clearances;

acoustics hazards; blast hazards; radio frequency (RF) hazards; flight hazards; security; launch restrictions; weather conditions; coordination with the 45th Civil Engineer Squadron; floodplains and wetlands; state and federal environmental laws (Section 4, Executive Order 11752); environmentally hazardous areas; obtaining and recording of waivers, exceptions, and variations; rights-of-way, easements, and out-grants; leases; antiquities; endangered and threatened species; cemeteries; orientation; safety; and compatibility.

- d. Results of planning, for integrated communications, instrumentation, and maintenance will comprise inputs to the Facilities Master Plan so that necessary facilities requirements may be reviewed and integrated into overall KSC requirements.
- e. The Facilities Master Plan revisions will be printed in 430- by 560-millimeter (17- by 22-inch) editions for distribution to NASA Headquarters and other authorized agencies. Continually updated originals shall be maintained for official use, and copies shall be made available through the NASA/AF Management & Comprehensive Master Planning Office, Spaceport Services Directorate.
- f. The Facilities Master Plan will provide planners with necessary data on existing facilities (e.g., buildings, roads, utilities, and lines-of-sight), which will aid in the development of realistic programming estimates.
- g. Advanced master planning will insure that sufficient real estate is available for projected needs and will insure orderly and efficient installation development while avoiding siting conflicts, piece-meal siting, and day-to-day planning.
- h. The Office of Chief Counsel will be consulted for appropriate legal advice when a potential conveyance or granting of any permit or license is involved in the master planning of KSC facilities.
- i. All area plans, vicinity plans, and detail site plans will be prepared by, or approved by, NASA/AF Management & Comprehensive Master Planning Office, Spaceport Services Directorate, prior to official release for any purpose, including construction/installation contracts.

3.6 PROCESSING OF FACILITY REQUIREMENTS

See Chapter 12 for the processing of KSC facilities requirements.

Chapter 4. BUDGETING

4.1 PURPOSE

This chapter defines requirements and assigns responsibilities for development of facilities, systems, and equipment budgets at KSC.

4.2 SCOPE AND APPLICABILITY

This chapter covers the development of the Construction of Facilities (CofF); Research and Operations Support (ROS), and Program Mission Support (PMS) budget for KSC facilities, systems, and equipment. This chapter is applicable to all KSC organizations and their associated contractors.

4.3 RESPONSIBILITIES

- a.** The Director of Spaceport Services is responsible for:
 - (1)** Managing the KSC CofF program budget development and implementation, including:
 - (a)** Issuing CofF call to KSC primary organizations for budget year and associated 5-year plan requirements.
 - (b)** Performing technical assessments of requirements.
 - (c)** Developing proposed budget year and associated 5-year plan requirements for each fiscal year CofF program.
 - (d)** Developing and coordinating fiscal year proposed CofF program requirement content and priorities with KSC primary organizations.
 - (e)** Submission of fiscal year proposed CofF program to NASA Headquarters for approval.
 - (2)** Providing budget inputs for ROS and PMS budgets for facilities, systems, and equipment in accordance with this chapter.
 - (3)** Serving as the focal point and KSC repository for requirements and related technical justification for facilities, systems, and equipment projects within the scope of Spaceport Services responsibility. In this capacity, will serve as the point of contact with NASA Headquarters and other NASA Centers.
 - (4)** Managing the KSC ROS and PMS budget and issuing KSC ROS and PMS budget/POP calls and guidelines.
 - (5)** Preparing and presenting the ROS and PMS budget/POP to the Center Director.
 - (6)** Participating in budget/POP presentations.
- b.** The KSC program/project managers are responsible for:
 - (1)** Managing program/project budget/Program Operating Plan (POP); issuing program/project budget calls and guidelines.
 - (2)** Providing program/project requirements.
 - (3)** Supporting the engineering activity during technical assessments.

- (4) Participating in the development of facilities, systems, and equipment priority lists and having the prime responsibility to establish the priorities for respective intra-directorate program/project related requirements.
- (5) Participating in Spaceport Services CofF budget presentation to KSC program/project managers with the program/project managers' primary concern being that of review and validation of their program/project requirements and justifications.
- (6) Supporting the Director of Spaceport Services in the Center Director's Facilities Utilization Review Board presentation.
- (7) Identifying and justifying CofF requirements to the appropriate program offices and ensuring operating plan consistency.
- (8) Taking lead for the budget/POP.
- (9) Preparing and presenting the budget/POP to the Center Director.
- c. Heads of primary organizations are responsible for:
 - (1) Submitting facilities, systems, and equipment budget requirements for program/project managers, ROS and CofF requirements to the Director of Spaceport Services, in accordance with this chapter.
 - (2) Supporting the engineering activity during technical assessments.
 - (3) Participating in Spaceport Services CofF budget presentation to the KSC program/project managers and KSC primary organizations, the KSC Program/Project budget presentations, and the Spaceport Services ROS budget presentations.
 - (4) Supporting the Director of Spaceport Services, the program/ project managers in their budget/POP presentations to the Center Director.

4.4 GENERAL PROVISIONS

- a. Budget preparation shall be in accordance with the requirements of NPR 8820.2.
- b. Facilities, systems, and equipment acquisition, disposal, design, construction, repair, modifications, and/or rehabilitation shall be properly approved prior to execution. This applies to all projects sited on land owned or controlled by the U.S. Government for which KSC has responsibility and is applicable regardless of source of funds or regardless of implementing methods, organization, or agent - whether Government or private.
- c. All requirements for facilities, systems and equipment acquisition, disposal, design, construction, modification, and/or rehabilitation shall be submitted to the responsible design organization for assessment and inclusion in the budget/POP. This does not include equipment under the management of the Director of Spaceport Services and the equipment, systems, and facilities related to exhibits under the management of the

Director, External Relations & Business Development, (see Chapter 3) and equipment supplied by another NASA Center where KSC is not responsible for the design. Projects will not be divided to avoid established fund limitations and approval levels.

- d. Requirements for facilities, systems, and collateral equipment projects to be funded by non-appropriated funds, such as Exchange Council funds or concessionaire service improvement account funds, will be submitted to the Director of Spaceport Services for appropriate action. (Reference NPD 9050.6)

4.5 PROCESSING OF BUDGET REQUIREMENTS

- a. The CofF budget review and approval cycle processing shall be in accordance with 4.6 below.
- b. The ROS budget/POP review and approval cycle processing shall be in accordance with 4.7 below.
- c. Processing of budget/POP for equipment under the management of the Director of Spaceport Services.

4.6 CofF BUDGET DEVELOPMENT, REVIEW, AND APPROVAL

- a. The KSC CofF budget call shall be issued by the Director of Spaceport Services to the KSC primary organizations with a submission and review schedule.
- b. Based on guidelines received, the KSC primary organizations shall prepare and submit their requirements in accordance with the requirements of the CofF budget call.
- c. The proposed requirements shall be assessed, reviewed, and approved for inclusion in the presentation of the proposed budget.
- d. Following assessment and review within Spaceport Services, the proposed budget, in priority order, will be forwarded to the KSC program/project offices and KSC primary organizations for review and resolution of differences, prior to KSC program/project manager final coordination.
- e. Spaceport Services shall coordinate the proposed budget with the KSC program/project managers and directors of KSC primary organizations for review and concurrence.
- f. Spaceport Services shall formulate the proposed budget consistent with the Program/Project Operating Plan for Program Direct requirements and budget year mission support guideline marks. The proposed CofF budget will then be presented to the KSC Center Director for approval.
- g. Spaceport Services shall prepare the necessary budget documentation in accordance with budget year Headquarters guidelines.
- h. After the Center Director's approval, Spaceport Services will submit the proposed CofF program budget to NASA Headquarters. A transmittal letter to the KSC Chief Financial

Officer for inclusion in the Center Budget submittal shall also be sent to NASA Headquarters.

4.7 ROS AND PMS BUDGET/POP DEVELOPMENT, REVIEW, AND APPROVAL

- a. Upon receipt of the ROS call and guidelines from NASA Headquarters, the Chief Financial Officer will compile a complete set of KSC programmatic and budgetary/POP guidelines using the NASA Headquarters' call letter and guidelines from KSC program/project managers. The call will direct that facilities requirements and ROS equipment requirements be forwarded to the responsible design organization, in accordance with Chapter 12 of this KHB, and that equipment requirements to be funded from ROS will be forwarded to Spaceport Services.
- b. Institutional facilities, systems, and equipment requirements will be included in the ROS and PMS budget/POP by Spaceport Services who will give an assessment to the individual Directors, make a dry-run presentation to the KSC Chief Financial Officer, and then present the ROS and PMS budget/POP to the Center Director for approval.
- c. Facilities, systems, and equipment requirements shall be assessed, reviewed, and approved for inclusion in the proposed budget/POP.
- d. To arrive at a final proposal, the proposed facilities, systems, and equipment portion of the budget/POP will be reviewed in working-type meetings with KSC program/project office personnel. The proposed facilities, systems, and equipment portion of the budget/POP will then be forwarded to the KSC program/project managers and directors of primary organizations.
- e. The KSC program/project managers will prepare their respective budget/POP, give their assessments to the individual Directors, make a dry-run presentation to the KSC Chief Financial Officer, and then present their respective R&D/SF CDC budget/POP to the Center Director for approval.
- f. Following the Center Director's approval, the ROS and PMS budget/POP will be forwarded to the KSC Chief Financial Officer for submission to NASA Headquarters.

Chapter 5. REAL PROPERTY

5.1 PURPOSE

This chapter defines requirements and assigns responsibilities for the accounting, recording, and reporting of real property.

5.2 SCOPE AND APPLICABILITY

This chapter covers all real property under the management of KSC. This chapter applies to all KSC organizational elements, KSC contractors to the extent specified in their contracts, and tenants at KSC (other NASA installations, other Government agencies, and private organizations) except the Department of the Interior (U.S. Fish and Wildlife Service and the National Park Service).

5.3 RESPONSIBILITIES

- a.** The Director of Spaceport Services is responsible for:
 - (1)** Maintaining detailed records for all real property under the management of KSC.
 - (2)** Establishing controls necessary to ensure that real property records are kept current.
 - (3)** Preparing leases and easements for all real property under KSC management.
 - (4)** Advising and assisting KSC management regarding real property accountability matters.
 - (5)** Directing periodic physical inventory and reconciling with the Financial Management Office the real property records with applicable fixed asset subsidiary ledger accounts.
 - (6)** Preparing real property management reports required by KSC management and NASA Headquarters.
 - (7)** Ensuring implementation of NASA Headquarters policy and procedures in connection with real property matters.
 - (8)** Coordinating the disposal of real property based on the Center's present and future missions.
 - (9)** Maintaining contact and coordination with NASA Headquarters, other Centers, Department of the Interior, and other Government agencies relative to real property accountability.
 - (10)** Assigning numbers to all KSC buildings, facilities, and office type trailers (see Chapter 14).
 - (11)** Obtaining building and facility numbers from JBOSC for NASA accountable facilities located at Cape Canaveral Air Force Station (CCAFS).
 - (12)** Obtaining equipment nameplate data as required.
 - (13)** Assuring that the requirements of NPR 8800.15 concerning certain real property acquisition actions are met and that feedback to the Director, Facilities Engineering Division, NASA Headquarters, is provided.
- b.** The Chief Financial Officer is responsible for maintaining financial capitalization criteria for real property and coordinating financial management policies with affected organizations.
- c.** Heads of primary organizations will provide to the KSC Real Property Accountable Officer, Spaceport Services Directorate, Requisition and Invoice/Shipping Documents (DD Form 1149) or other bills of material, the cost of labor and benchstock, and the name and phone number of a technical contact for all modifications to real property,

including the installation or removal of installed equipment valued at more than \$5,000, and facilities work estimated to cost \$5,000 or more.

5.4 GENERAL PROVISIONS

- a.** The real property records will be maintained by the JBOSC contractor and managed by the KSC Real Property Accountable Officer, NASA AF Management & Comprehensive Master Planning Office, and Spaceport Services Directorate.
- b.** Copies of all documents pertaining to real property transactions, such as acquisition, disposal, leases, and permits will be included in the real property records.
- c.** The real property records managed by the Real Property Officer, serve as subsidiary records to the general ledger control accounts maintained by the General Accounting Office. Costs recorded in subsidiary records must be in agreement with the general ledger accounts.
- d.** Pursuant to NASA FMM 9252-10, record balances for capitalized real property will be reconciled with the financial accounts at least semiannually.
- e.** Criteria to be used in determining items to be capitalized as real property are contained in FMM 9252-3.
- f.** Real property records will be maintained on a current basis. Transactions involved in maintaining property records are as follows:
 - (1)** Acquisitions of real property - Necessitates an addition to real property records.
 - (2)** Disposals of real property - Necessitates a deletion in real property records.
 - (3)** New Construction - Necessitates an addition to real property records. This transaction should be made at the time of beneficial occupancy, physical completion of facility, or when title is invested in NASA, whichever occurs first.
 - (4)** Addition or expansion of an existing facility –Necessitates an addition to real property records to reflect the physical increase.
 - (5)** Modifications - Changes to the arrangement or physical characteristics of an existing facility, so that it may be more effectively utilized for its designated purpose, will necessitate an adjustment of the real property records when the total cost is \$5,000 or more and when it has been determined that the modification is a capital improvement.
 - (6)** Installation, removal, or replacement of installed property - The installation or removal of a complete item of installed property will necessitate an adjustment to the real property records when the cost of the item is \$5,000 or more. The replacement of an installed property item will necessitate both debit and credit adjustment of the real property records when the cost of either item being removed or the replacement item is \$5,000 or more. Installation costs are excluded in the above instances.

- (7) Discrepancies noted in physical inventory – May necessitate debits and/or credits to the real property records without a documented voucher stating the conditions or reasons for adjustment.
- (8) Granting of leases and easements shall be in accordance with NPR 8800.15 and 14 CFR 1204.503 and 1204.504. Requirements for leases and easements are determined by the user organization. Once the determination and justification have been made by a user organization that a land use is required, the Real Property Accountable Officer has the responsibility to prepare, coordinate, and monitor all leases and easements. Prior to submittal to NASA Headquarters for approval, the request is reviewed by the KSC Chief Counsel's Office and the user organization, to ensure that all criteria are met. Upon approval by the Director, Facilities Division, NASA Headquarters, and acceptance by the Grantee, the agreement is then reviewed by affected organizations prior to the Center Director's approval. A copy will be provided to general accounting for those agreements involving the collection of funds.
- g. The KSC Real Property Accountable Officer will prepare the following NASA record forms. They will be prepared in accordance with Instructions and Real Property codes, NASA Form 1134.

NASA Form 844 Real Property Record – Land

NASA Form 845 Real Property Record – Building

NASA Form 846 Real Property Record – Other

NASA Form 847 Real Property Record – Leasehold Improvements

NASA Form 1045 Real Property Transaction Voucher

- h. When acquisitions, modifications, alterations, or other capital improvements to real property are being accomplished by installation/construction contract, a Transfer and/or Notification of Acceptance of Accountability of Real Property (NASA Form 1046) will be prepared per Appendix F, for the transfer and acceptance of accountability of the real property. Also, DD Form 1149, Requisition and Invoice/Shipping Document will be prepared giving complete manufacturer's name plate data for each item of installed equipment costing \$5,000 or more and will be attached to the NASA Form 1046. The Forms 1046 and 1149 will be prepared by the Contracting Officer Representative and forwarded to the KSC Real Property Accountable Officer. When an acquisition or improvement is accomplished by the Corps of Engineers, transfer may be by DD Form 1354. These forms are to be used primarily for:
 - (1) Effecting transfer of real property between KSC and other NASA installations or Government agencies.
 - (2) Providing transfer and acceptance of accountability of installation/construction work performed by a contractor or by NASA personnel.

- i. When acquisitions, modifications, alterations, or other capital improvements to real property are being accomplished by a modification package, or when modifications (including installation, removal, and/or relocation) of real property involving facilities work estimated to cost \$5,000 or more, or installed equipment valued at \$5,000 or more are being accomplished the following will be provided to the KSC Real Property Accountable Officer within 30 days after completion of the work.
 - (1) The organizational unit obtaining materials/equipment associated with a modification will provide a copy of the DD Form 1149's or other bill of materials with the total cost and cost per item of at least the equipment items shown on the forwarded copy.
 - (2) The O&M organization performing modifications work will provide the cost of labor and benchstock expended for each modification project, the project control number or other identifying number, and the name and phone number of a technical contact.
- j. The KSC Real Property Accountable Officer will forward one copy of NASA Form 1045 with a copy of the pertinent DD Form 1354 or NASA Form 1046, to the General Accounting Office.
- k. The KSC Real Property Accountable Officer will perform field checks to become familiar with work performed, to check the NASA Form 1046 and DD Form 1149 received, to obtain equipment name plate data, if required, and to affix real property identification tags to the new real property installed equipment.
- l. Under the direction of the KSC Real Property Accountable Officer, building numbers will be assigned JBOSC, after construction has started, but before completion, to facilitate the preparation of maintenance records and space assignments.
- m. CCAFS building numbers will be obtained by the KSC Real Property Accountable Officer from the CCAFS Facilities Programs.
- n. Building numbers will be changed or retired when one or more buildings, through modification, are joined or separated.
- o. An alpha suffix may be used in conjunction with a building number where two or more buildings are closely related as to function or in their support, such as an equipment room. This is done only when they fall close to or within the same grid.
- p. When two or more buildings fall within the same grid and are not related, a number from an adjoining grid will be used, after it has been determined that the possibility of that number being used is remote.
- q. The following types of facilities will not be numbered:
 - (1) Septic tanks.
 - (2) Transformer substations, when in direct support of a numbered building or facility.
 - (3) Walkway bridges.

- (4) Underground storage tanks, when in support of a numbered building or facility.
- (5) Cooling towers, when in support of an adjoining building or facility.
- r. The KSC Real Property Accountable Officer will furnish real property documents, as required by NPR 8800.15, to the, Facilities Engineering Division (Code JX), NASA Headquarters.

5.5 PROCESSING OF REAL PROPERTY REQUIREMENTS

See Chapter 12 for processing of real property requirements.

Chapter 6. PROBLEM REPORTING AND CORRECTIVE ACTION

6.1 PURPOSE

This chapter defines requirements for identifying, reporting, analyzing, and preventing recurrence of problems that affect fit, form, or function, except for normal wear or damage in transit or handling.

6.2 SCOPE

This chapter covers KSC facilities, systems, and equipment for which KSC has design responsibility.

6.3 AUTHORITY

All discrepancies and problems that affect KSC facilities, systems, and equipment shall be reported and processed in accordance with the requirements of KHB 5310.1.

6.4 PROCEDURES

- a. Problem closeout will be accomplished by the cognizant KSC operating and/or maintenance organization, in coordination with the organization's Quality Assurance representation, as a result of:
 - (1) Remedial action taken by the cognizant operating and/or maintenance organization.
 - (2) An approved deviation/waiver.
 - (3) Implementation of a modification package. The modification package shall also be used to authorize hardware substitutions. The approval and release of modification packages will be accomplished by Document Release Authorization (DRA), KSC Form 21-68, according to KDP-KSC-P-1537. The DRA will identify the problem report being worked/closed out.

- (4) Technical documentation revision. Documentation revisions will be approved and released by DRA according to KDP-KSC-P-1537. The DRA will identify the problem report being closed out.
- b. Deviations/waivers that are granted to close out a problem report will be statused until closeout, per the requirements of KHB 5310.1.

Chapter 7. TURNOVER OF OPERATIONS AND MAINTENANCE AND/OR SUSTAINING ENGINEERING RESPONSIBILITIES FOR FACILITIES, SYSTEMS, AND COLLATERAL EQUIPMENT

7.1 PURPOSE

This chapter defines requirements and responsibilities for turning over operations and maintenance (O&M) and/or sustaining engineering responsibilities for facilities, systems, and collateral equipment under the management control of KSC.

7.2 SCOPE AND APPLICABILITY

This chapter covers the turnover of O&M and/or sustaining engineering responsibilities of entire facilities, systems, or collateral equipment, or portions thereof. This section applies to all KSC organizational elements and to their associated contractors to the extent specified in their respective contracts.

7.3 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for:
 - (1) Coordinating with each operations directorate to determine the O&M and/or sustaining engineering responsibilities for each system to be turned over to the operations directorates.
 - (2) Assuring that the operations directorate receives a complete set of released engineering and procurement documentation, and that complete up-to-date documentation is available through the documentation centers at the time of turnover.

NOTE: Deficiencies will be identified and scheduled for delivery. Responsibility for ensuring timely and complete resolution of deficiencies will remain in Spaceport Services.

- (3) Determining, in coordination with the responsible operations directorates, the timing of the turnover of O&M and/or sustaining engineering responsibility (initially or when subsequent actions dictate).
- (4) Determining, in conjunction with the responsible operations directorates, the necessary data package (as-built drawings, schematics, certificate of completion of construction for environmental systems, O&M Requirements and Specifications Documentation (OMRSD), parts list, Critical Items List (CIL), Single Failure Point (SFP) assessments, Failure Modes and Effects Analyses (FMEA's), etc.) and transmitting it on KSC Form

21-136, (Turnover of O&M and/or Sustaining Engineering Responsibility for KSC Facilities, Systems, and Collateral Equipment, to the operations directorate(s) for turnover of O&M and/or sustaining engineering (see Appendix F).

- (5) Arranging for services required to maintain a facility, system, and/or collateral equipment in acceptable condition until such time as assignment of O&M responsibility to an operations directorate can be arranged, unless the user has accepted interim or partial turnover. In this case, the user will be responsible for arranging for the services required to maintain the facility, systems, and/or collateral equipment.
- (6) Determining, in conjunction with the operations directorates, the necessity or desirability of turning over (interim turnover) a partially completed facility, system, or collateral equipment for O&M, prior to final acceptance. Assuring that a KSC Form 21-136 is processed within 10 working days of the agreement.
- (7) Assuring that the facilities, systems, and/or collateral equipment scheduled for turnover have been successfully tested, documented, and accepted (partial facilities, systems, and equipment, with the exception of life safety systems, may be considered for interim turnover, prior to final acceptance) and that the operations directorates have participated fully in the planning and conduct of these activities. The O&M will be provided an acceptance test planning schedule and will be notified at least 24 hours prior to the acceptance test of any schedule changes.
- (8) Providing final O&M turnover of facilities, systems, and/or collateral equipment that fulfill the mandatory code requirements and that perform their intended functions or listing and defining open discrepancies.
- (9) Coordinating with the operations directorates the turnback of O&M and/or sustaining engineering responsibility prior to major modifications, refurbishments, and repairs that will not be accomplished by the O&M.
- (10) Providing the KSC Property and Supply Officer a copy of the KSC Form 21-136, in advance of the schedule turnover, so that transfer of accountability of controlled personal property can be accomplished. Purchased equipment will be transferred by DD Form 1149, with documentation and sustaining engineering being transferred by KSC Form 21- 136.
- (11) Assuring the transfer of all applicable engineering documentation to/from the sustaining engineering contractor(s) immediately after turnover/turn-back agreement.
- (12) Identifying, 60 days prior to turnover, any unique test equipment, initial spares, and training that will be provided to the O&M.
- (13) Determining the date of final inspection/walkdown and providing the operations directorates 10 working days notice and providing the operations directorate with two sets of as-built drawings or current construction drawings, 5 working days prior to final inspection.

- b. The Directors of Shuttle Processing and International Space Station/Payload Processing, and Spaceport Services, are responsible for ensuring:
 - (1) Coordination with Spaceport Services in the testing and acceptance of facilities, systems, and collateral equipment.
 - (2) Acceptance of O&M and/or sustaining engineering responsibility on KSC Form 21-136 for facilities, systems, and/or collateral equipment, when properly turned over by Spaceport Services. Signature and return of the original form to the originator and the contractor signature, if direct transfer between the contractor and Spaceport Services is desired by the O&M.
 - (3) Coordination of the turnback of O&M and/or sustaining engineering responsibility prior to major modifications, refurbishment, and repairs that will not be accomplished by the O&M.
 - (4) Cooperation with Spaceport Services in the turnover determination (interim turnover) of partially completed facilities, systems, or collateral equipment for O&M, prior to final acceptance.
 - (5) Delivery of up-to-date Operations and Maintenance Documentation (OMD) to Spaceport Services at the time of turnback for major modifications, refurbishment, and repairs.
 - (6) The establishment of contact points within their directorates for turnover transactions.
 - (7) That all requirements, including training, initial spares, and unique test equipment to be provided as part of the project are defined.

NOTE: These requirements shall be provided no later than the final design review.

7.4 GENERAL PROVISIONS

- a. Turnover or turnback of O&M and/or sustaining engineering responsibility for facilities, systems, and collateral equipment will be recorded on KSC Form 21-136 which shall be prepared in accordance with Appendix F.
- b. Thirty working days in advance of the time established for the turnover/turnback, final determination of O&M responsibility will be jointly discussed and confirmed between the cognizant operations directorates and Spaceport Services. If the discussion reveals split O&M responsibility, each responsible operations directorate will identify its respective areas of responsibility in writing to Spaceport Services and provide a copy to the other operations directorates involved in the turnover. This information will be provided 20 working days prior to the scheduled turnover. Spaceport Services will provide a separate KSC Form 21-136, and data pack, to each O&M organization, if more than one is identified.

NOTE: The Directorates involved in the facility will be jointly responsible for the determination of O&M responsibility, no later than the completion of the final design review.

Further, the cognizant O&M organization must be aware of all changes made during construction.

- c. Where it is determined to be in the best interest of the Government, interim turnover of facilities, systems, or collateral equipment to the appropriate operations directorates will be executed before considering contractor maintenance from an outside source (see 7.3.a.(5)). During interim turnover, specific maintenance responsibilities are to be identified by all parties, utilizing KSC Form 21-136.
 - d. If O&M and/or sustaining engineering responsibilities are not acceptable to the operations directorates, it is mandatory that a memorandum explaining the reasons for nonacceptance be forwarded to the originator of the KSC Form 21-136, within 20 working days after receipt of proposed turnover agreement. If accepted, the KSC Form 21-136 must also be returned to the originator within 20 working days. For large or complex turnovers, extensions to the response time for acceptance or rejection will be mutually agreed to in advance.
- (1) When the O&M organizations participate in design reviews and have the opportunity to critique the design prior to award of contract, refusal to accept a turnover will not normally be based on requirements which were not identified during the design reviews. Changes in operational requirements and/or the need, to include mandatory code requirements subsequent to project design, should be identified by O&M organizations on a timely basis and must be jointly worked by the operations and design directorates.
 - (2) These "Not in Contract" (NIC) items will be submitted by the operations directorate(s) to the Project Management Branch for disposition. The applicable Project Management Branch will respond by memorandum to the operations directorate(s) with a firm plan of disposition within 20 working days after receipt of the NIC list. This disposition will be based on project resources required to accomplish the task and validity of the requirement. Every effort will be made to resolve the NIC items with the operations directorates, particularly those involving safety and/or environmental regulatory issues.
 - (3) "Punchlist" items (deficiencies between the product and contract documentation) will be submitted by the operations directorates to the Construction Office for resolution and the operations directorates advised of the disposition 10 days prior to the issuance of the turnover package. Any "NIC" item received as a "Punchlist" item will be forwarded immediately to the Project Management Branch, and the operations directorates advised of the action by copy of the transmittal memorandum. The Project Management Branch will take action as required by the preceding paragraph.
- e. For Spaceport Services designed modifications implemented by the O&M on facilities, systems, or collateral equipment, for which they already have O&M and sustaining engineering responsibility, the operations directorates will perform modifications upon release of the EI, and will be responsible for O&M and sustaining engineering upon completion of implementation.

- f. For turnbacks, if O&M and/or sustaining engineering responsibilities are not acceptable to the Spaceport Services Directorate, a memorandum explaining the reasons for nonacceptance will be forwarded to the cognizant operations directorate within 10 working days after receipt of the proposed turnover agreement.
- g. Accountability for all controlled personal property will remain with the KSC Supply and Equipment Management Officer until such time as the operations directorates turn over O&M to a contractor (e.g., SFOC JBOSC, CAPPs). At that time, the KSC Supply and Equipment Management Officer will transfer accountability to the appropriate contractor.
- h. Accountability for real property and collateral equipment will remain with the KSC Real Property Accountable Officer.
- i. Upon receipt of a finalized KSC Form 21-136, the Project Management Branch will transfer record of ownership to the new Responsible organization (R.O.) and provide a copy of the Form 21-136 to the applicable documentation centers to facilitate the physical transfer of the documents.
- j. For projects on CCAFS, where acceptance of O&M responsibilities requires an Air Force contract change, Spaceport Services will provide an advance notice to 45 SW through the responsible operations directorates at least 90 days prior to the planned O&M turnover date. For contracts having duration of less than 90 days, the O&M will be notified within 7 days after contract award.

Chapter 8. REVALIDATION OF EXISTING REQUIREMENTS FOR KSC FACILITIES, SYSTEMS, AND EQUIPMENT

8.1 PURPOSE

This chapter defines requirements and assigns responsibilities for revalidation of existing requirements for KSC facilities.

8.2 SCOPE AND APPLICABILITY

This chapter covers the revalidation of all requirements for KSC facilities in accordance with NPR 8800.15.

8.3 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for periodically conducting a review of existing requirements for and utilization of KSC facilities.
- b. Heads of all KSC organizations are responsible for supporting Spaceport Services in reviewing existing requirements for and utilization of KSC facilities.
- c. KSC program/project managers are responsible for revalidating existing requirements for KSC facilities.

8.4 GENERAL PROVISIONS

- a. Revalidation of requirements for and utilization of KSC facilities will be accomplished at approximately one-year intervals.
- b. Other reviews will be conducted, as required, when programmatic requirements have a major impact on KSC facilities.
- c. The heads of KSC organizations will furnish to Spaceport Services the names of persons who will interface with the Spaceport Services Facility Utilization Planner for revalidation of existing requirements.
- d. Utilization reviews will be coordinated with KSC organizations utilizing the KSC Request for Issuance Clearance (RFIC) (KSC Form 1-4).
- e. When the results of a review indicate underutilization of major facilities and/or land, no action relative to actual disposal will be taken prior to obtaining the concurrence of the KSC Facilities Utilization Review Board.

Chapter 9. TECHNICAL DOCUMENTATION RECORDS AND RELEASE SYSTEM

9.1 PURPOSE

This chapter defines requirements and assigns responsibilities required to maintain a complete and accurate facilities, systems, and equipment technical documentation records and release system.

9.2 SCOPE AND APPLICABILITY

This chapter is applicable to all facilities, systems, and equipment at Kennedy Space Center and applies to all KSC organizational elements.

9.3 RESPONSIBILITIES

- a. The Director of Spaceport Services is ultimately responsible for the maintenance of KSC facilities, systems, and equipment technical documentation records and a release system, which will assure uniformity in release and retrieval at any KSC documentation center.
- b. The Directors of International Space Station/Payload Processing, Expendable Launch Vehicle and Payload Carriers Program, Spaceport Engineering & Technology, and Shuttle Processing are responsible for assuring that their sustaining engineering contractors comply with the requirements of this chapter.

9.4 GENERAL PROVISIONS

- a. Technical documentation shall be prepared in accordance with GP-435, Volumes I and II, and KSC-DF-107.

- b. A uniform record/release system shall be maintained for the formal release of all technical documentation required for use in the management of KSC facilities, systems, and equipment in accordance with KDP-P-1293.
- c. A repository for all facilities, systems, and equipment technical documentation masters shall be maintained and shall provide the following:
 - (1) Filing, indexing, and ultimate retirement of technical document masters.
 - (2) Fast, efficient retrieval of technical documentation originals, and copies of single items, as well as groups of related items (e.g., drawings, drawing change documents, and parts list; all subsystem/equipment drawings for a particular system).
 - (3) An orderly historical record of the original configuration and all changes thereto.
- d. A cross-referencing function shall be maintained to assure that mutually dependent documents are cross-referenced to one another.
- e. A capability will be maintained to provide data and documentation in support of program/project baselines; i.e., Preliminary Design Reviews (PDR's), Critical Design Reviews (CDR's), Design Certification Reviews (DCR's), and Configuration Inspections (CI's). The data system shall be capable, as a minimum, of providing a printout of the technical documentation defining the end item at the time of baseline review. The data elements must include those documents which identify each part and its precise configuration at any level of assembly required to support KSC activity. As a minimum these data elements include:
 - (1) Document Type (e.g., drawing, specification, plan).
 - (2) Document Number.
 - (3) Document Title (or descriptive noun).
 - (4) Revision.
 - (5) Engineering Order (EO) Number.
 - (6) Modification Package Numbers.
 - (7) Modification Package Closeout Date.
 - (8) Effectivity.
 - (9) DRA Number.
 - (10) DRA Release Date.
 - (11) Program Control Number (PCN) and Program Change Identification Number (PCIN), when applicable.
 - (12) System Identifier (number and nomenclature)
 - (13) Location.
- f. When it is necessary to issue advanced information, preliminary release of incomplete documentation may be authorized. When a preliminary release is made, the word "Preliminary" and the date shall be indicated on all sheets of the document.

9.5 PROCESSING

All technical documentation shall be processed (preparation, review, approval, release, filing, indexing, microfilming, retrieval, etc.) in accordance with GP-435 and KDP-P-1293.

Chapter 10. SIGNS

10.1 PURPOSE

This chapter defines requirements and assigns responsibilities for the management of signs at KSC.

10.2 SCOPE AND APPLICABILITY

This chapter covers the management of facility, street name, traffic control, and construction contractor signs at KSC. This chapter applies to all KSC organizational elements, to their associated contractors to the extent specified in their contracts, and tenants at KSC (other NASA installations, other Government agencies, and private organizations).

10.3 RESPONSIBILITIES

- a. The Director of Spaceport Services, or representative, is responsible for:
 - (1) Reviewing, coordinating, and approving support requests which delineate facility sign requirements.
 - (2) Reviewing, coordinating, and approving all street name sign requests.
 - (3) Reviewing and approving all construction contractor signs prior to installation.
 - (4) Ensuring that all traffic control, roadside or median signs are installed in accordance with Department of Transportation Regulations.
- b. The Director, External Relations & Business Development, is responsible for:
 - (1) Approving sign/sign requirements used in conjunction with KSC Visitors Complex.
 - (2) Reviewing requests for all roadside and median signs, other than traffic control, prior to their erection.
- c. The Chief, Protective Services Branch, is responsible for reviewing and approving requests for all traffic control, roadside, or median signs prior to their erection.

10.4 FACILITY SIGNS

- a. Facility and/or function identification signs may be used at any building or facility, which houses personnel. They shall be used at all facilities or areas, which require frequent visitation by personnel other than the employees normally working at that location. Examples are: Dispensary, Locksmith, Supply, Shipping and Receiving, Security, and Pass and Identification. The signs shall identify the name and building number as shown in the official Facilities Master Planning and Real Property records.

They shall not show the company name or logo of any NASA support contractor. Signs identifying other Government agencies, which utilize facilities within KSC, shall conform to this chapter.

- NOTE:**
1. KSC Visitors Complex signs are exempt from facility sign requirements. Signs/sign requirements for this facility are to be approved by the Director, External Relations & Business Development.
 2. KSC Press Site must conform to the KSC sign requirements for building numbers. However, the press may include an affiliation logo to aid visitors in finding the proper location or for broadcast purpose. The NASA Press Site Manager must approve the affiliation size and location.
- b. All facility and/or function signs used at KSC shall be in conformance with the design, fabrication, and erection requirements established in KSC-SPEC-F-0009.
- c. Requests for facility signs shall be prepared on a Support Request (SR), KSC Form 19-15, and forwarded to the KSC Real Property Accountable Officer, for review, coordination, and approval. Aspects reviewed will include: requirements outlined in KSC-SPEC-F-0009; proposed location of sign; and interference with existing or planned elements of the facility, utility lines, or other such structures. Coordination will include Protective Services Branch and External Relations & Business Development, when applicable. Following approval, the SR will be forwarded to the present base support contractor for implementation.
- d. Facility signs shall be located so they will identify the facility without obstructing access to either the facility or adjacent utilities. They shall also be situated so they will not obstruct sight distances or otherwise create traffic hazards. Generally, this will mean that facility signs will be sited to identify the main entrance to a building or area and will be placed on the facility side of any ditch.

10.5 STREET NAME SIGNS

Street name signs shall indicate the name identification of the street as shown on the currently approved Facilities Master Plan. Street name signs and posts shall be positioned at each intersection, mounted with their faces parallel to the streets they name, as close to the corner as practicable and where they can easily be seen by motorists and pedestrians. At cross streets two assemblies are required, on diagonally opposite corners. At other intersections, one assembly is required.

10.6 TRAFFIC CONTROL AND ROADWAY SIGNS

Traffic control signs shall be located and positioned in accordance with the standard established in D6.1 by the U.S. Department of Transportation, Federal Highway Administration. The number of traffic control signs shall be limited to the minimum essential for the safe and orderly direction and control of traffic. No other signs will be installed that conflict with or obscure any traffic control sign. All support requests for roadside or median signs shall be submitted to the Director of Spaceport Services.

10.7 CONSTRUCTION CONTRACTOR SIGNS

The Director of Spaceport Services shall administer signs for construction contractors. Unless specifically otherwise permitted, such signs shall conform to the following:

- a. Construction contractor signs shall be located as directed by the Contracting Officer, based on support from the Director of Spaceport Services.
- b. All construction contractor signs must be reviewed and approved by the Spaceport Services Construction Office (Facilities Division) prior to installation. Such signs shall be furnished, erected, maintained, and removed by the construction contractor without cost to the Government. All signs shall be in conformance with KSC-SPEC-F-0009. The mounting, location, and erection of construction contractor signs shall be in accordance with requirements set forth in the contract for the specific project.
- c. Contractors and their major subcontractors may erect signs to identify their trailers or construction offices. To facilitate deliveries made to construction sites, construction contractors may erect directional signs alongside KSC's main thoroughfares. Requests for these signs shall follow the procedure outlined in paragraph 10.7b of this chapter. The Chief, Protective Services Branch, who will ensure that no safety or security provision will be violated by the erection of the sign, will also review these requests.

Chapter 11. IDENTIFICATION AND INITIATION OF NEW REQUIREMENTS AND PROPOSED CHANGES IN KSC FACILITY, SYSTEM, AND EQUIPMENT REQUIREMENTS

11.1 PURPOSE

This chapter establishes the requirements and assigns responsibility for the identification of requirements for new facilities and the initiation of proposed changes in KSC facility, system, and equipment requirements.

11.2 SCOPE AND APPLICABILITY

The chapter covers new requirements and proposed changes in design requirements which affect KSC facilities, systems, and equipment. It is applicable to all KSC organizations that identify or initiate proposed changes in requirements for KSC facilities, systems, and equipment.

11.3 RESPONSIBILITIES

- a. Heads of operations and maintenance (O&M) organizations are responsible for assessing O&M requirements to determine if a requirement can be met with existing capability. Where the assessment shows that an O&M requirement cannot be met with existing facilities, systems, and equipment, the following shall apply for

- (1) Facilities: If the estimated cost for the proposed changes in requirements for an existing facility is under \$500,000, the requirement shall be submitted to Spaceport Services in accordance with the requirements of KDP-KSC-P-1319.
 - (2) Facilities: If the estimated cost for proposed new requirements for a new facility or changes in requirements for an existing facility is over \$500,000, the proposed new requirements or changes in existing requirements shall be submitted in the Center's Annual Construction of Facilities (CofF) Program Budget Call. Guidelines for these submissions are given in the annual call letter and NPR 8820.2, Facilities Project Implementation Handbook.
 - (3) Systems and Equipment: Proposed new requirements for new systems and equipment or changes in requirements for existing systems and equipment shall be submitted to the responsible O&M organization's CCB in accordance with provisions of this chapter. If changes in requirements to systems and equipment are tied to facility modifications over \$500,000, requirements shall be included in a project requirements document and in the appropriate budget call.
- b. Heads of the O&M organizations are responsible for the development of a detailed project requirements document to define the general characteristics, performance, design and construction, safety, reliability, maintainability, and quality aspects of a facility, system or equipment project prior to the start of design or Preliminary Engineering Report (PER).
 - c. Heads of the responsible KSC design organizations are responsible for satisfying the detailed project requirements for facilities, systems, and equipment. In the case of discrete facility projects over \$1.5M and involving new construction or major facility modifications, this responsibility includes support of the O&M advocate organization's development of the Facility Concept Study (as described in NPR 8820.2, Facility Project Implementation Handbook), followed by support of the O&M advocate organization's development of a detailed project requirements document. Both of these efforts must be coordinated with the O&M advocate organization to allow adequate preparation for the Facility Concept Study and detailed requirement document development prior to the start of the Preliminary Engineering Report.

11.4 GENERAL PROVISIONS

- a. Requests from all KSC organizations for action by the responsible design organization shall be documented on the Engineering Support Request (ESR), KSC Form 21-319, and submitted to the O&M's CCB. The ESR shall be prepared in accordance with Appendix C.
- b. The ESR may be used for, but not limited to, the following types of engineering actions:
 - (1) Changes in requirements or new requirements for the repair or modification of existing KSC facilities under \$500,000.
 - (2) New facilities under \$500,000.

- (3) Changes in requirements or new requirements for KSC systems and equipment.
 - (4) Design changes that affect the form, fit or function of KSC facilities, systems, and equipment.
 - (5) Changes to the KSC Ten-Year Facilities Master Plan or other master plan actions (sittings, etc.).
 - (6) Requests for KSC real property actions to the KSC Real Property Accountable Officer.
 -
 - (7) Requests for cannibalization.
 - (8) Requests for hardware substitution.
 - (9) Investigations which will eliminate or reduce the use and subsequent wastes associated with the use of hazardous wastes.
 - c. KSC organizations may initiate a field engineering change by submitting a completed Nonconformance Problem Report (KSC Form 2-151) for approval, in lieu of the ESR, during emergency situations.
 - d. A request to substitute an item of hardware/equipment for an item designated by the design documentation (hardware substitution) may be submitted by ESR except as follows:
 - (1) An equivalent item may be used without submitting a request or obtaining additional approval.
 - (2) When hardware substitution is associated with the implementation of a modification package, it will be handled in accordance with Chapter 9.
 - e. A Facilities and Equipment Requirements Document (FERD) shall be prepared by the O&M organization with the support of the design organization and approved by both the design organization and the O&M organization for facility, systems, and equipment projects prior to the start of the PER or a detailed design. For discrete facility projects above \$1.5M for new construction or major modifications, the following shall apply:
 - (1) FERD shall be prepared in accordance with the current version of NPR 8820.2, chapter 2. If requirements to systems and equipment are tied to these facility requirements, requirements are to be included in a project requirements document and in the appropriate budget call.
- For critical GSE systems and equipment the following shall apply:
- (2) Requirements documents for GSE or equipment shall be prepared by tailoring KSC-STD-P-0001 as required to meet the O&M needs.

For projects under \$500,000, the requirements document may be a checklist or as complete as for a discrete project, depending on the complexity of the project. This decision will be made and agreed to by the design project manager and the O&M's project manager. Changes to or revisions of the requirements document shall be made only through the agreement between the design and O&M project managers.

PHYSICAL SPACE MANAGEMENT

12.1 PURPOSE

This chapter defines requirements; provides criteria, standards, and procedures; and details responsibilities for the allocation, reallocation, assignment, utilization, and reporting to NASA Headquarters of all physical space under the control of KSC. Appendix G, containing the Space Classification Code Summary and Definitions has been added this change.

12.2 SCOPE AND APPLICABILITY

This chapter applies to all organizations occupying KSC-owned Real Property regardless of its location.

12.3 RESPONSIBILITIES

- a. The Director of Spaceport Services is responsible for managing the utilization of physical space, changes in use or modifications to physical space, and for reporting space utilization data to NASA Headquarters and others with a need to know.
- b. The Facility Utilization Planner, Space Utilization Function is responsible for:
 - (1) Serving as KSC Facilities Utilization Officer (FUO) which includes being the KSC Facilities Utilization Review Board (FURB) secretariat, scheduling FURB meeting functions, and providing the single point of contact having authority to ensure moves, modifications, and associated communications conform to KSC move policy as approved by the FURB.
 - (2) Managing tenancy of all office, warehouse, technical, and associated special purpose space in all facilities and trailers classified as KSC real property. This includes making assignments, reassignments, and coordinating with Directorate Facility Utilization Managers (DFUMs) prior to withdrawing assignment of space that is vacant or not properly utilized or justified and disposition deviation requests.
 - (3) Monitoring the utilization of all assigned space. This includes providing and maintaining Physical Space Management System(s) (PSMS) and Data Base with updated facilities and space information and detailed data, performing periodic physical surveys, coordinating with assigned Directorate's Facility Utilization Manager (DFUMs) and other organization utilization managers.
 - (4) Reporting space utilization data to the FUB and NASA Headquarters in accordance with NPR 8800.15.

- (5) Ensuring KSC facilities utilization policies are implemented and followed:
 - (a) Establishing KSC processes to ensure consistent application of KSC utilization policies, deviation tracking, and standards.
 - (b) Coordinating Facility Utilization procedures with organizational contacts. Reviewing and approving all support requests for the movement of NASA and contractor personnel and/or "plant rearrangements," within a staff or program/project office, within a first- or second-level directorate, or between primary organizations, and ensuring they are approved by signature by the proper DFUM.
 - (c) Providing disposition authority for moves, modifications and communications packages.
 - (6) Chairing Centerwide facility and space utilization efforts, including the Facilities Working Group (FWG) and KSC Move Committee.
 - (7) Coordinating with KSC organizations and obtaining approval for removal of a facility or a portion of a facility, acquisition of additional facilities, and the siting of temporary housing units. This includes providing alternate and cost-effective space, where possible, to support major modifications and support new programs or projects requiring additional space.
 - (8) Developing and maintaining the KSC long range planning for KSC Facility Utilization and Zoning Plans.
- c. Heads of primary organizations are responsible for:
- (1) Submitting, in writing, to NASA AF Management & Comprehensive Master Planning Office, the appointment of:
 - (a) a Directorate Facility Utilization Manager (DFUM) for each directorate and Center staff offices to serve as single points of contact concerning physical space matters;
 - (b) a primary and alternate member to the FWG; and
 - (c) a KSC Move Committee member or point of contact.
 - (2) Efficiently utilizing physical space assigned to their organizations and reporting to the FUO all anticipated shortages or overages in the PSMS as required by paragraph 12.3.b(2) and 12.4.g.
- NOTE:** Overages must be turned over to NASA AF Management & Comprehensive Master Planning Office for reassignment.
- (3) Providing updated information for input to the PSMS and other special studies/reports, as required, to maintain accurate housing and real property data.
 - (4) Integrating all activities within assigned spaces to prevent interference with users of adjacent areas or spaces.

- (5) Ensuring that the provisions of this chapter are included in all KSC onsite contracts in which the use of NASA or contractor-owned or leased space is pending. Utilization meets the requirements of paragraph 12.5c. Office space that exceeds the paragraph 12.5c criteria must be documented by a deviation recorded in the PSMS for existing exceptions, or for new deviations a memorandum for record should be written and submitted for approval by the FUO. A copy of this approval will be forwarded to the requester by the Chief, NASA AF Management & Comprehensive Master Planning Office, and will be submitted with any resulting Engineering Support Request (ESR) or Support Request (SR).

- (6) Ensuring timely turnover of any physical space requiring major modification.

NOTE: The turnover will be in accordance with Chapter 7 of this directive.

- (7) Ensuring their personnel are not double desked; (not desked at more than one worksite), unless specifically approved by the FUO.
- (8) Coordinating move issues with the KSC Move Committee, Facility Working Group, Site Managers, DFUMs, and FUO for compliance with paragraph 12.4.b.
- (9) Ensuring the DFUM has the opportunity to make POP inputs supporting facility communications, equipment, and items related to personnel housing and moves.

- d. The Chief, NASA/AF Management & Comprehensive Master Planning Office is responsible for placing non- JBOSC, trailer units in FUO authorized trailer parking spaces, and ensuring requests involving movement of trailers are properly coordinated with the DFUM before the actual move of the units. The DFUM is responsible for ensuring the NASA AF Management & Comprehensive Master Planning Office is notified, in a timely manner, of any new or relocated trailer locations.

NOTE: By contract, the JBOSC, SFOC, and CAPPS are authorized to move/place their own trailer units. Since paragraph 12.3d(5) requires this chapter to be placed in their contracts, the preceding requirements also apply to the movement/placement of their trailer units. The NASA AF Management & Comprehensive Master Planning Office must also be notified by these contractors, in a timely manner, of any new or relocated trailer locations.

- e. The Procurement Officer is responsible for:

- (1) Authorizing, from a contractual standpoint, contractor requests for leasing or purchasing trailers or offsite physical space based on the FUO recommendation of validated requirements.
- (2) Advising NASA AF Management & Comprehensive Master Planning Office of all new contracts requiring onsite space and obtaining assurance of availability prior to commitment.
- (3) Coordinating KSC onsite contractor's requirements for lease or purchase of trailers and/or offsite physical space with the involved primary organization's space

coordinator/DFUM, and obtaining approval of the NASA AF Management & Comprehensive Master Planning Office prior to negotiating such leases or purchases.

- (4) Advising NASA AF Management & Comprehensive Master Planning Office and the involved primary organization's space coordinator, at least 60 days in advance, of termination of leases of trailers or other leased space occupied by contractor or NASA organizations.
 - (5) Ensuring supplies and equipment procured for personnel housing and move modifications meet the Federal Acquisition Regulations (FAR) requirements and have been coordinated with Integrated Financial Management Plan (IFMP) Asset Management.
- f. Site Managers and DFUMs are responsible for:
- (1) Assessing operational needs per paragraph 12.4.b and assuring adequate housing in operational areas.
 - (2) Coordinating changes in space classification and assignment with the FUO.
 - (3) Ensuring their assigned areas of responsibility adhere to the requirements of paragraph 12.5.
 - (4) Providing NASA AF Management & Comprehensive Master Planning Office with updates and corrections to the PSMS database within 30 days of changes.

12.4 GENERAL PROVISIONS

- a. NASA and KSC policy states that organizational elements or activities occupying facilities are "tenants" rather than "owners" of such facilities and, as such, lack authority to authorize changes in the use of or to make modifications and/or "plant rearrangements" to facilities without approval of the FUO or the KSC FUB.
- b. In the assignment of physical space at KSC, due consideration must be given to operational requirements, economy, efficiency, and energy conservation. After FUO assignment in operational areas, the primary organization's site manager will control the utilization of physical space that can directly affect processing operations and mission support.
- c. Physical space will be assigned based on validated requirements. Space will be assigned for a particular use such as office, warehouse, technical, or special purpose. Changes will not be made in uses of the categories of space without the coordination with and prior approval of NASA AF Management & Comprehensive Master Planning Office.
- d. Physical space requirements, which cannot be met with existing assigned space, will be forwarded, by the DFUM, to NASA AF Management & Comprehensive Master Planning Office for processing.

- e. Lease or purchase of trailers and/or offsite physical space will be authorized only when no suitable or usable space is available in NASA-owned or occupied facilities.
- f. Offsite physical space will not be used for the storage of critical flight hardware/ground support equipment nor for the storage, handling, or generation of classified information without prior approval of the KSC Protective Services Branch. Additionally, the contractor's security office should always be involved in selecting the offsite facility to ensure that all physical/ technical security standards are addressed.
- g. Updating of the PSMS will be accomplished in the following manner:
 - (1) Physical space surveys performed regularly and/or randomly by the FUO, DFUMs, Site Manager, and contractor personnel supporting the NASA AF Management & Comprehensive Master Planning Office Space Utilization Function and after major moves.
 - (2) Markup of computer printouts by NASA DFUMs, civil service and federal tenant organizations.
 - (3) Contractor inputs, by limited direct entry, floor plan redlines, and redlines of PSMS printouts, and as spelled out in the terms of their contracts; e.g., SFOC, JBOSC, and CAPPS.
 - (4) Submitting status letters, indicating requested changes, from DFUMs to NASA AF Management & Comprehensive Master Planning Office.
 - (5) Direct entry, by NASA AF Management & Comprehensive Master Planning Office and their support contractor, into the PSMS.

12.5 CRITERIA AND STANDARDS

- a. All space will be assigned at the primary NASA civil service organizational level.
- b. Any change in classification or transfer of facility space will be by space assignment through NASA AF Management & Comprehensive Master Planning Office. Internal organizational transfers of like space classification require PSMS update but no new assignment by NASA AF Management & Comprehensive Master Planning Office.
- c. Total office space will be allocated on the basis of a targeted overall KSC and Directorate maximum average of 11.6 square meters (m²) (125 square feet) per person (including year-round positions such as co-ops, students, and visiting professors). The 11.6 m² per person includes all desked office personnel, personal desktop computers, printers, terminals, bookcases, desks, tables, filing cabinets, copier and FAX machines, refrigerators, office entrances, access and circulation areas, and other optional items (See classification definitions in Appendix G). An exception is made for all executive office suites for the Center Director, heads of primary NASA and contractor organizations, deputy heads of primary NASA and contractor organizations, and Center Director and heads of primary NASA and contractor organizations Executive Secretaries' reception area and suite entry. In

these cases, the executive suite is not counted in the average. The 11.6 m2 average per desked person is subject to change based on Center management requirements and availability of total space. The minimum cubicle/office size will be 50 square feet.

- d. KSC will utilize the open office concept, i.e. there will be limited wall separations between work groups and no private offices except for supervisory positions. Office cubical paneling (less than 68 inches high per fire code for 36 inch wide aisles) is permitted. Existing walls will be removed as personnel relocations, moves, and facility modifications occur. The KSC Facility Utilization Officer (FUO) must approve exceptions to this rule.
- e. Private office space is defined as space with floor-to-ceiling walls and a door. Private office space and maximum office sizes will be authorized and assigned as follows:

<u>POSITION</u>	<u>MAXIMUM OFFICE SIZE</u> <u>Square Feet (SQ M)</u>
Heads of Primary NASA & Contractor Orgs.	400-480 (44)
Deputy Heads of Primary NASA & Contractor Orgs	300-360 (33)
Associate Director of Primary NASA & Contractor Orgs.	240-280 (22)
Heads of 2 nd -Level Directorates, Heads of Subcontractors	240-280 (22)
Deputy Heads of 2nd-Level Dirs., Dep. Heads of Subcontractors	200-240 (22)
Chiefs of Division/Office, Managers	200-240 (22)
Technical Assistants to Directors/Branch Chiefs	150-200 (22)
Leads, Supervisors	110-120 (12)
Any other private office	110-120 (12)

Contractor and tenant personnel office space will be assigned based on positions equivalent to the civil service positions defined above. Assignment of private office space for personnel not listed above, or for office sizes larger than listed above, must be submitted in writing by the head of a primary organization to the FUO, the FUB, and to the Director of Spaceport Services for approval.

- f. Whenever possible, support services (i.e.; mailroom, libraries, credit union, etc.) should be placed on the first floor of a building.
- g. Special purpose space; e.g., major conference rooms, schedule rooms, documentation rooms, computer/data processing rooms, and shared Computer Aided Design (CAD) workstation/computer rooms for multiple users, are assigned based on validated requirements. Special-purpose-type space will not be committed to another type of use without prior approval of NASA AF Management & Comprehensive Master Planning Office.
- h. Trailers will generally be assigned to functions requiring frequent moves and functions of a temporary nature where no permanent facilities are available such as launch pads and construction areas.

12.6 PROCEDURES

- a. Submission of requirements: All requests for space will be submitted in writing with complete information on type of space required, area involved, need date, and complete justification. Requests for private offices will require one or more of the following: grade and title of occupant, unique conditions requiring private office, occupant is a supervisor, any other justification required by FUD or FUB.
- b. Requests for assignment of space will be submitted as follows:
 - (1) Each contractor shall submit their requirements to their primary civil service technical representative, or contract technical manager who will coordinate the request with the DFUM..
 - (2) Primary organizations shall submit requirements, which they cannot fulfill from their current space assignment, through their designated DFUM, to NASA AF Management & Comprehensive Master Planning Office.
 - (3) NASA AF Management & Comprehensive Master Planning Office shall refer to the affected primary organization's DFUM tenant organization requests for space allotments within their assigned space. The organization's DFUM will evaluate the request and make appropriate assignments, as required. If no space is available to house the tenants, the DFUM will request assistance from the NASA AF Management & Comprehensive Master Planning Office staff.
 - (4) Requests for trailer units or siting shall be submitted in writing indicating the requirements for the parking space (siting) existing at the requested location. This must be indicated in the request. When siting is required, it is to be submitted to the NASA AF Management & Comprehensive Master Planning Office.
- c. Action to be taken by the Directorate Facility Utilization Manager on requests for space, moves, and modifications:
 - (1) Reviews and approves all physical space actions received to assure that the requirement is adequately described, completely justified, and within the requirements of this chapter, including full definition of heating, ventilating, air conditioning, lighting, equipment cooling requirements, communications including telephone and data lines, and office furnishing.
 - (2) Immediately coordinates with and notifies NASA AF Management & Comprehensive Master Planning Office of the requirements, new assignment, vacated space or any changes in areas that may affect other organizational elements.
 - (3) Forwards requirements to NASA AF Management & Comprehensive Master Planning Office for action when there is no available or usable space within the resources of the directorate to meet additional requirements. These resources will include all trailer units assigned to the directorates.
 - (4) Reviews all SR's, work orders, and floor plan modification layouts by civil service and contractor personnel in their directorate to ensure conformance with this chapter and FUB policy.

- (5) Signs the Support Request(s) or work order(s) as the directorate authority confirming utilization compliance before forwarding to NASA AF Management & Comprehensive Master Planning Office for concurrence.
- d. Action to be taken by the NASA AF Management & Comprehensive Master Planning Office Space Utilization Planner:
 - (1) Reviews all requests received to ensure requirements are within the requirements and policies established by this chapter and the FUB.
 - (2) Evaluates all requests against available Center resources, or will become available, and assigns or reallocates such space, as necessary, to fulfill the requirements, except as noted in subparagraph d(5).
 - (3) Makes space assignments and forwards copies to all affected organizations' DFUM.
 - (4) Forwards changes to the PSMS to the support contractor for input.
 - (5) When space is not available within the Center's resources (including trailers), determines whether the deficit is temporary or long term and takes measures to provide additional space by:
 - (a) Requiring NASA or contractor elements to reduce the overall square-meter-/square-foot-) per person average and consolidate units to provide temporary or semi-permanent relief for a nominal number of personnel, depending on the total space assigned and the location.
 - (b) With concurrence of the Director of Spaceport Services and after validation of requirements:
 - (1) Recommending the Procurement Officer authorizes lease of offsite office, technical, or warehouse space on an interim or semi-permanent basis.
 - (2) Recommending the Procurement Officer authorizes leasing trailer units by NASA or contractor elements to alleviate a temporary situation (such as, a special project for a period of 90 days or less), or to provide space in the area where permanent buildings cannot be placed, or to meet an immediate housing requirement in an area where permanent buildings may be available at a later date.
 - (3) Recommending the Procurement Officer authorize purchasing trailer units for semi-permanent launch or hazardous areas where the requirement is continuous and no other units can be made available from the Center's resources.
 - (4) Programming, and providing justification and other necessary backup data, for permanent or temporary space to satisfy future requirements as outlined in the out year housing plans.

- e. Obtaining NASA Headquarters approval to lease or purchase trailers or other relocatable structures in accordance with NPR 8800.15.

CHAPTER 13. NASA FACILITY ROOM NUMBERING STANDARDS

13.1 PURPOSE

The purpose of this chapter is to explain the standards that the contractor supports the NASA Facilities and Space Utilization Office follows for developing methods of assigning door numbers to all new facilities, new numbers resulting from facility modifications, and for renumbering doors in facilities when deemed necessary.

As such, the contractor's Real Property Office is to be included in the design process of new facilities and to provide a review of the designed numbering scheme by no later than the 60% design review and also prior to Fire Alarm programming and installing signage, if the configuration has changed since the 60% review. The contractor's Real Property Office is to also be included in the design process for facility modifications and to provide a review of the designed numbering scheme prior to the modifications.

13.2 BASIC FORMAT

Door number assignments should follow one of two basic number formats:

- a. For Facilities 5,000 square feet or less: A Three-position number plus up to a two-position qualifier. See Figure #1.
- b. For Facilities greater than 5,000 square feet: A Four-position number plus up to a two-position qualifier. See Figure #2. Note if higher than a nine-story facility, this becomes a five-position number plus up to a two-position qualifier.

Figure #1: 123A1	Figure #2: 1234A1
<ul style="list-style-type: none"> First number (1) indicates floor. Next two numbers (23) indicates the ninety-nine (99) possible whole numbers per floor. Next character (A) represents a sub room or cubical designation within a main room off a hall. NOT to be used for main doors off a hallway. Last number (1) is only used to define a double, triple or quad cubical or larger. 	<ul style="list-style-type: none"> First number (1) indicates floor. Next number (2) represents wing. If only one wing, use zero (0). Next two numbers (34) indicates the ninety-nine (99) possible whole numbers per wing/floor. Next character (A) represents a sub room or cubical designation within a main room off a hall. NOT to be used for main doors off a hallway. Last number (1) is only used to define a double, triple or quad cubical or larger.

13.3 REQUIREMENTS FOR ASSIGNING ROOM NUMBERS

- a. Whole door numbers should be assigned to every exterior and interior door off a main corridor or hallway beginning at or near the main entrance of a facility using even numbering on one side of a hall and odd on the other. Each door receives a unique number even if more than one door enters into a single room (see item 5 below for further info). When assigning **wings, also use the even/odd approach. Note: Even/Odd numbering or assigning wings may not be applicable for facilities under 5,000 square feet.
- b. Door numbers using an alpha extension or suffix are to be used only within a main room. No doors off of a hallway should be assigned an alpha extension. The alpha characters I and O are NOT to be used. All interior rooms, including floor-to-ceiling rooms, landscape partitions (cubicles), and Logan-wire-fence areas, are to be numbered using an alpha character. If a landscape partition area is divided into double, triple or quad cubicles, etc., it will be numbered left-to-right with a numerical extension beginning with one (1). i.e. 1234A1.
- c. Door numbers should follow a logical path throughout the facility being numbered. Within this logical path, no number should be greater on one side of a hall than the next number on the opposite side of the hall.
- d. Allow spacing for additional whole numbers off hallways to accommodate possible future doors being added. A helpful rule-of-thumb, allow for a new number every fifteen lineal feet or so even if no door is present. By skipping those unused numbers, allows for future modifications without having to renumber an entire area or facility.
- e. KSC complies with the Uniform Federal Accessibility Standards (UFAS). New door numbers for doors only off the main corridor shall meet the UFAS. UFAS section 4.30 applies to building signage. The UFAS WEB site is: <http://www.access-board.gov/ufas/ufas-html/ufas.htm>

NOTE: Whole Numbers: Numbers not including an alpha character suffix.

NOTE: Wing Definition: In addition to an actual wing, a wing could be defined as a section or group of rooms on one side of a center hallway dividing a facility into more than one part vs. a group of rooms on the opposite side. Another circumstance may be front and back hallways, each being a different wing. Any combination of the prior can be defined as a wing and any number of wings can be assigned to a facility.

Chapter 14: NUMBERING OF BUILDINGS AND TRAILERS

14.1 PURPOSE

The purpose of this chapter is to establish a standardized numbering system for all NASA facilities at KSC, including permanent and temporary buildings, trailers, storage, and miscellaneous facilities.

14.2 SCOPE AND APPLICABILITY

This chapter applies to organizational elements of KSC; other NASA organizations and Government agencies residing on KSC, and to NASA/KSC contractors and contractor leased trailers in accordance with the provisions of their respective contracts. Cape Canaveral Air Force Station (CCAFS) assigns numbers to all CCAFS permanent facilities, regardless of tenant. It covers:

- a. All permanent buildings.
- b. All trailers designed primarily as office units and used as such.
- c. All trailers designed primarily as office units and used as laboratory, shop, spares storage, or instrumentation units.
- d. All trailers (whether NASA owned or contractor leased) designed for a specific purpose (e.g., restroom trailers and public information television trailers) and not carried as heavy equipment or hand-receipt property.

14.3 RESPONSIBILITIES

- a. The KSC Real Property Accountable Officer is responsible for:

- (1) Facility Numbers

- (a) Controlling and assigning facility numbers for all NASA-owned and controlled facilities, including permanent and temporary buildings on KSC Property. CCAFS assigns numbers to all permanent facilities located on CCAFS property; this includes NASA/KSC controlled permanent facilities.
- (b) Preparing a SR directing that facility numbers be placed on all four corners of buildings, or as deemed appropriate by the Real Property Accountable Officer, and forwarding the SR to the Joint Base Operations Contractor Work Management Branch.
- (c) Numbers placed on buildings/facilities will be 150 millimeters (mm) (6.0 inches) in height and will be placed approximately 1500 mm (5 feet) above the ground. For uneven, textured buildings, numbers will be painted on metal sign blanks and attached to the building wall. Numbers on facilities with smooth textured walls will be affixed with spray paint. (See figure 14-1.)
- (d) Numbers shall be assigned in accordance with the Facilities Master Plan.
- (e) A facility number shall be assigned after construction has begun.
- (f) All new facility numbers shall be published in the KSC Quarterly Real Property Report.

(2) Trailer Numbers

- (a)** All NASA owned trailers will be assigned a controlled number. A trailer number will be assigned upon receipt of documentation consisting of certificate of origin, or title, or DD Form 1149 transferring ownership to NASA. NASA/KSC-owned trailers that are located at CCAFS are assigned numbers by the NASA/KSC Real Property Accountable Officer.
- (b)** Trailer number listing shall be updated and listed in the KSC Quarterly Real Property Report.
- (c)** NASA/KSC-owned single-wide trailers shall be identified as TR1-XXX and NASA/KSC-owned multiwide trailers shall be identified as TRM-XXX.
- (d)** Numbers placed on trailers shall be 100 mm to 125 mm (4 to 5 inches) in height and shall be placed 1500 mm (5 feet) from the trailer bottom. The identifying number shall be placed on both the front and back of the trailer as shown in figure 13-2.

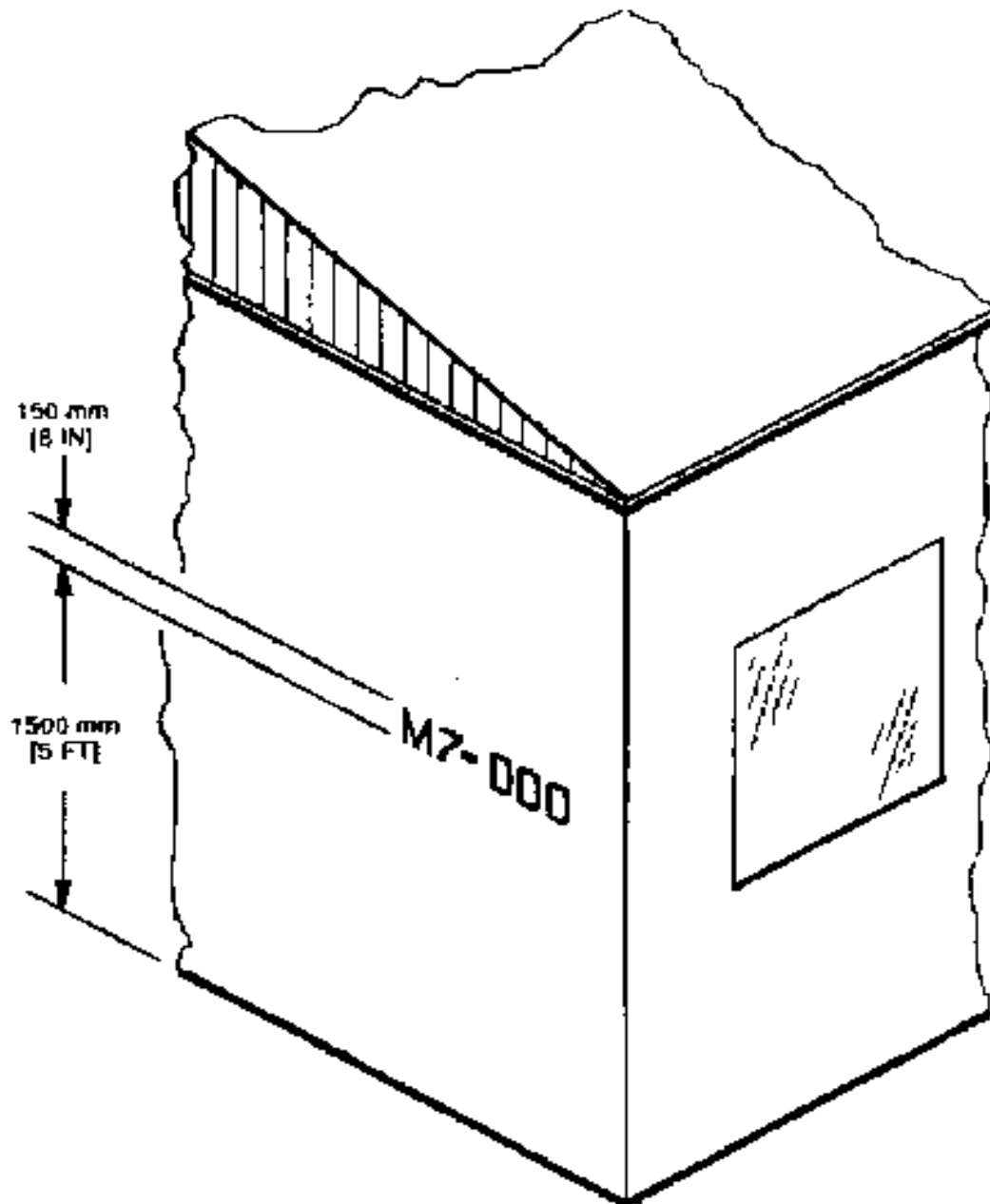


Figure 14-1. Numbering of Buildings

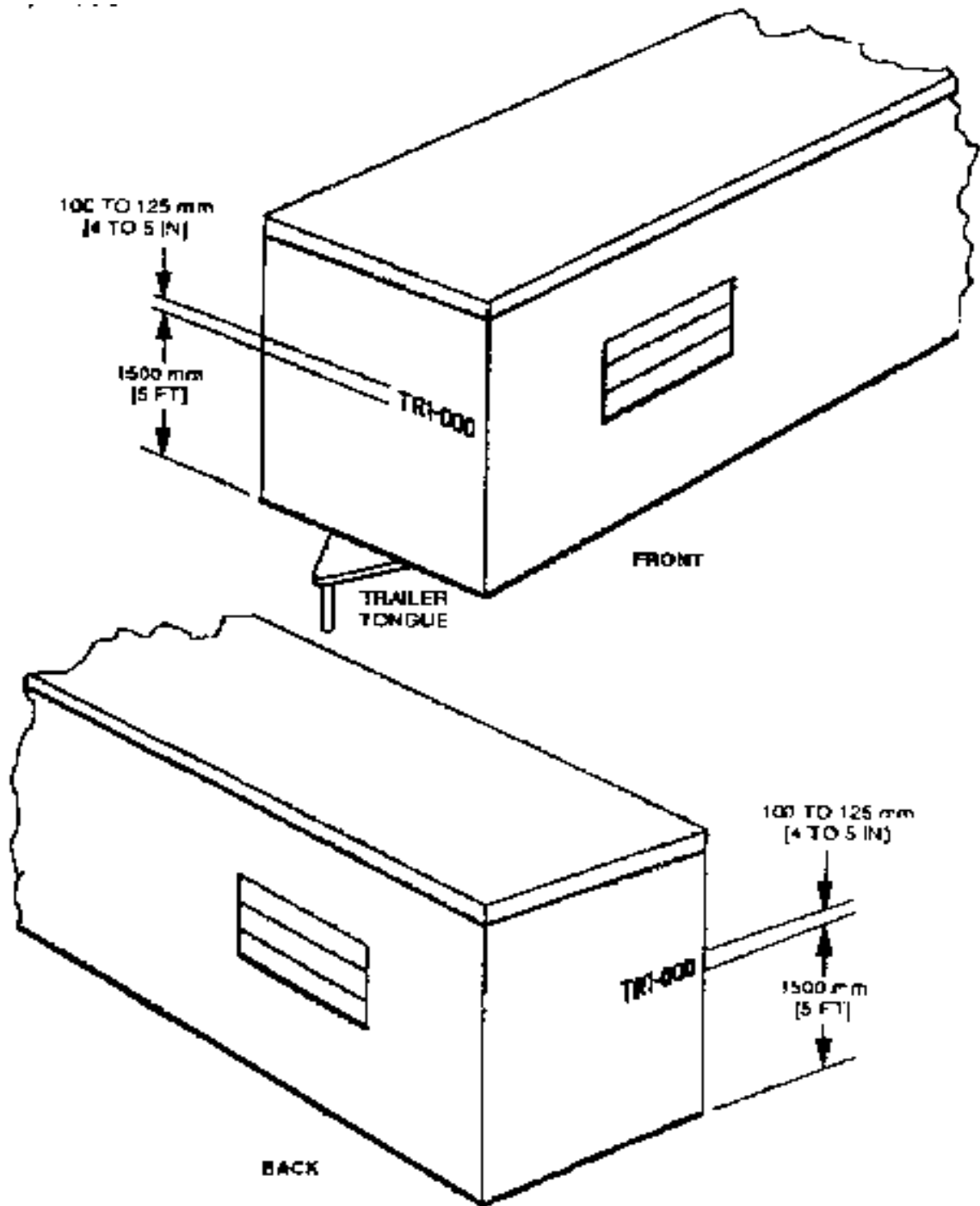


Figure 14-2. Numbering of Trailers

- b.** The Facility Utilization Planner, NASA AF Management & Comprehensive Master Planning Office is responsible for:
 - (1)** Controlling and assigning trailer numbers for NASA/KSC leased trailers.
 - (2)** Controlling and assigning trailer numbers for construction contractor, other Government-Agency-owned, or leased trailers.
 - (3)** Controlling and assigning trailer numbers for contractor-owned or-leased trailers parked on KSC or areas of CCAFS assigned to KSC.
 - (4)** Furnishing any changes, additions, deletions, modifications to the list of trailer numbers, in accordance with paragraphs 13.3(2)a-d, to the support contractor responsible for the Physical Space Management Database updates control.
 - (5)** The list shall indicate the assigned trailer number, location of the trailer, and organization of assignment. The list shall be furnished, as changes occur to affect the integrity of the PSMS.
- c.** Heads of primary organizations are responsible for:
 - (1)** Furnishing the NASA AF Management & Comprehensive Master Planning Office with the contractor's name, size of trailer, anticipated location of trailer, additional requirements (if any), and proposed use of contractor-owned or -leased trailer, prior to arrival of the trailer.
 - (2)** Ensuring, through the respective Contracting Officer, that contractors under their surveillance obtain the required trailer number following the unit's onsite setup.
 - (3)** Ensuring that the assigned trailer numbers are used on all support requests for maintenance, janitorial or relocation services for all trailer units (Government or contractor-owned or leased) and in all correspondence pertaining to such units.
 - (4)** Ensuring that all trailers under their surveillance have the assigned number properly placed on each unit as shown in figure 14-2.
- d.** Contracting Officers are responsible for ensuring that the provisions of this chapter are considered for inclusion in contracts under their cognizance, when appropriate, and for ensuring compliance with these provisions when included in contracts.
- e.** The Chief, NASA AF Management & Comprehensive Master Planning Office, will be responsible for:
 - (1)** Marking buildings as shown in figure 14-1.
 - (2)** Marking trailers as shown in figure 14-2.
 - (3)** Honoring only those valid support requests that reference trailers which are properly numbered in accordance with this chapter.

14.4 GENERAL PROVISIONS

- a. The real property numbering system is based on the Rand McNally Grid System. An overlay has been designed to be used in conjunction with the Facilities Master Plan. The grid blocks are numbered numerically north and south and alphabetically east and west.
- b. The following system of numbers shall be used to identify trailers:
- | | |
|---|---------|
| NASA-owned multi-wide trailers | TRM-XXX |
| NASA-owned trailers | TR1-XXX |
| NASA-leased trailers | TR2-XXX |
| Other-Government-Agency-owned trailers | TR3-XXX |
| Other-Government-Agency-leased trailers | TR4-XXX |
| Construction/Contractor-owned trailers | TR5-XXX |
| Contractor-leased trailers | TR6-XXX |
- c. Buildings and trailers shall be marked as shown in figures 13-1 and 13-2, respectively.
- d. Other Government agencies shall submit their requests for assignment of building or trailer numbers directly to the NASA/ KSC NASA AF Management & Comprehensive Master Planning Office.

APPENDIX A: ACRONYMS AND ABBREVIATIONS

45 SW	45 th Space Wing
AA-A	Deputy Director
XA-E	Communications Division
ADP	Automatic Data Processing
JBOSC	Joint Base Operations Contractor
SGS-5030	Facilities Management Services
CAD	Computer Aided Design
CAPPS	Checkout, Assembly and Payload Processing
CC	Office of Chief Counsel
CCAFS	Cape Canaveral Air Force Station
CCB	Configuration Control Board
CCBD	Configuration Control Board Directive
CCF	Converter Compressor Facility
CDR	Critical Design Review
CI	Configuration Inspection
CIL	Critical Items List
CODE JX	Facilities Engineering Division, NASA Headquarters
CoF	Construction of Facilities
DCR	Design Certification Review
DD	Defense Department
DDT&E	Design, Development, Test, and Evaluation
DIPEC	Defense Industrial Production Equipment Center
DOD	Department of Defense
DRA	Document Release Authorization
DSA	Defense Supply Agency
EA	Engineering Assessment
N/A	Not applicable
NASA	National Aeronautics and Space Administration
NEMS	NASA Equipment Management System
NPR	NASA Procedural Requirements
NIC	Not in Contract
NPD	NASA Policy Directive
OMD	Operations and Maintenance Documentation
OMRSD	Operations and Maintenance Requirements Specifications Documentation
OP	Procurement Office
O&M	Operation and maintenance
PAAP	Public Affairs Activity Plan
PER	Preliminary Engineering Report
PCIN	Program Change Identification Number
PCN	Program Control Number
PDR	Preliminary Design Review
PSMS	Physical Space Management System
PMS	Program Mission Support
POP	Program Operating Plan

RF	Radio frequency
RFIC	Request for Issuance Clearance
R&D	Research and Development
R.O.	Record of ownership
ROS	Research and Operations Support
RFP	Request for Proposal
RFO	Request for Offer
SFCDC	Space Flight, Control, and Data Communications
SFP	Single failure point
SFOC	Shuttle Flight Operations Contractor
SR	Support Request
U.S	United States
VAFB	Vandenberg Air Force Base

APPENDIX B: REQUIREMENTS FOR PREPARATION OF ENGINEERING SUPPORT REQUESTS (ESR'S) (KSC FORM 21-319)

B.1 GENERAL

- a. The Engineering Support Request (ESR) (KSC Form 21-319) shall be used by the KSC organization requesting engineering action and by the responsible design organization. See section 12 of this handbook for the detailed requirements for utilizing ESR's.
- b. Unless otherwise noted, KSC Form 21-319 shall be completed by the requesting KSC organization.
- c. If the information required to explain or answer the request is already documented, enter the document number in the DESCRIPTION block and attach the document to the Engineering Support Request.
- d. If particular blocks are not applicable to the type of request, mark the blocks "N/A."
- e. If additional space is required to complete a block, use the Document Continuation Sheet (KSC Form 2-131).

B.2 COMPLETION INSTRUCTIONS

Complete each block on the ESR form as follows (completion instructions are also shown on the reverse side of the form):

Item No.	Item Title	Explanation
1.	Date	Enter the ESR preparation date.
2.	Program No	Enter the program identification number (e.g., PCIN for Shuttle).
3.	ESR No.	Enter the ESR number (PCN) and ESR revision number, as required. Obtain the ESR and ESR revision numbers from the responsible design or configuration management organization.
4.	Sheet <u> </u> of <u> </u>	Self-explanatory
5.	Location	Enter the location where the support is required (e.g., LC-39, SLF, VPF, HDQ, etc.)
6.	Effectivity	Enter the mission for which the request is planned or proposed to support.
7.	Event Req'd By	Enter the event for which the request action is to be completed.
8.	User Need Date	Enter the date by which the request action is to be completed.
9.	Category	For proposed changes, enter either mandatory (Category I) or highly desirable (Category II). See Appendix A for a definition of mandatory and highly desirable changes.

10.	Facility/System/	Enter the name of the facility/Equipment system/equipment the request action is against.
11.	Part	Enter the name of the part involved in the request.
12.	Part No.	Enter the part number of the part involved in the request.
13.	Ref. Des/Find	Enter the reference designation/find number of the part involved in the request.
14.	Level Interface Affected	Enter the level interface affected by the request, if any.
15.	Title	Enter a descriptive title for the request.
16.	Description of Requirement/	Enter a complete detailed description of the Condition/Event requirement, condition, and/or events. List all the attached documents. Any suggested methods of implementation shall be entered here.
17.	Manufacturer	Enter the name of the manufacturer of the part, equipment, etc.
18.	Type of Action	Enter the type of action as follows: 1. New requirement 2. Change requirement 3. Replace like item 4. Budget requirements 5. Field engineering change 6. Repair 7. Master Plan 8. Real Property 9. Disposition instruction 10. Cannibalization 11. Studies 12. Other (specify)
19.	Schedule Impact	Identify any potential impact to major program or mission milestones.
20.	Action Requested	Enter a descriptive paragraph of the action requested. If an equipment acquisition is involved, give the delivery location and the hand receipt account (HRA) number provided by the organization's Property Custodian.
21.	Justification	Enter a detailed justification for the request. Describe the impact if the request is not implemented.
22.	Comments and Action Items	To be filled out by the responsible design organization. Enter any pertinent comments and actions required to implement the request.
23.	Technical Contact	Enter the signature of the organization of the originator of the request and the date of

		signature.
24.	Approval	Enter the signature and organization of the person of the originating organization approving the request and the date of approval.
25.	Design Approval	To be filled out as specified by the responsible design engineering organization.

APPENDIX C: REQUIREMENTS FOR PREPARATION OF ENGINEERING ASSESSMENT(KSC FORM 21-146)

C.1 GENERAL

- a. The Engineering Assessment (EA) (KSC Form 21-146) will be used to document the impact on KSC of the proposed new or change requirement.
- b. The EA will be prepared by design or sustaining engineering organizations on all requirements which must be assessed to provide the approving official adequate information to make a decision.
- c. The EA, except for the recommendation block, shall be prepared in an objective manner, with the assumption that the requirement is valid. If it is proven, through the EA preparation phase, that the requirement is invalid, every attempt will be made to convince the requester of this fact, with a recommendation to withdraw or amend the requirement. If this cannot be accomplished, the EA shall be prepared setting forth the solution in an objective manner and in Block 18, Rationale for Recommendation, all differences with the requirement will be documented and all pertinent facts supporting the recommendation will be entered.
- d. If the appropriate block on the form contains insufficient space for full explanation of an item, a Document Continuation Sheet, KSC Form 2-131, should be used.

C.2 COMPLETION INSTRUCTIONS

Complete each block as follows: (If a block is not applicable, mark "N/A").

Item No.	Item Title	Explanation
1.	Originating Organization	Enter name and organization symbol or organization, which submitted the requirement.
2.	Date	Enter date the initiating document was originated.
3.	PCIN	Enter Program Change Identification Number (PCIN), if applicable.
4.	EA No.	Enter the Engineering Assessment Number. The EA number is the Project Control Number (PCN).
5.	Category	For proposed changes, enter either mandatory (Category I) or highly desirable (Category II). See Appendix A for a definition of mandatory and highly desirable changes.
6.	Affectivity	Enter the recommended affectivity.
7.	Initiating Document	Enter initiating document identification such as "ESR 63492" which means Engineering Support Request Number 63492
8.	Fac/Sys/Equip. No.	Enter the facilities, systems, or equipment identification number from the Identification Codes, Drawing Number 79K10173.
9.	Sheet of Self explanatory.	
10.	Facilities/Systems/ Equipment Affected	Enter facility, system and/or equipment affected and location and Location (area). Also enter TR 1287 number, if applicable.
11.	Impact: Design MH	Enter the estimated man-hours to accomplish the

		design.
12.	Fab MH	Enter the estimated man-Hours required for Fabrication.
13.	Materials \$	Enter the estimated Materials cost.
14.	Installation MH	Enter the estimated man-Hours required for installation.
15.	Total Estimated Cost \$	Enter the total estimated Cost of the change less design cost.
16.	Event Required By	Enter the event for which the requirement is needed.
17.	User Need Date	Enter the need date specified by the requester.
18.	MP Delivery Date	Enter the date the modification package is to be released
19.	Descriptive Title	Enter descriptive title of the work to be accomplished to satisfy the requirement.
20.	Method of Satisfying Requirement	Check the appropriate block(s). Enter in this space the proposed method of satisfying the requirement. If a facilities, systems, or equipment modification is required, enough details should be provided to establish the scope of the work and to provide the reviewing official(s) an opportunity to learn the significant elements of the work. The method of accomplishment should be stated (modification package, contract, procurement, etc.).
21.	Recommendation	Check the appropriate block.
22.	Rationale for Recommendation	Enter all pertinent facts supporting the recommendation.
23.	Effect on	Check areas affected and on a continuation sheet give details of the effect.
24.	Reference Documents	Enter reference documents as provided by technical organizations, such as studies, preliminary engineering report, etc.
25.	Open work to be Completed Prior/With Subject Work	Enter identification number(s) of open work items, which are related. To this work in such a manner that the open work must be completed prior to starting this work or must be accomplished with this work.
26.	Prepared By	Self-explanatory.
27.	Approved By	Enter signature of the approving official or his designee and date of approval.

APPENDIX D: REQUIREMENTS FOR PREPARATION OF CONFIGURATION CONTROL BOARD DIRECTIVES (CCBD) (KSC FORM 2-122)

D.1 GENERAL

- a. The Configuration Control Board Directive (KSC Form 2-122) will be used to document the decision of the approving official for each engineering assessment of facilities, systems, and equipment, which are under Program/Project configuration control.
- b. The applicable portions of the Configuration Control Board Directive (CCBD) shall be prepared prior to a CCB meeting. Remaining portions of the CCBD shall be prepared at the meeting.
- c. A discrete CCBD number shall be assigned to each CCBD in accordance with the block of numbers allocated by the appropriate Program/Project Office. CCBD numbers will be issued and assigned sequentially.
- d. Number logs will be maintained, by each CCB, which will provide the CCBD No., date, applicable change number, and dates for all CCBD revisions.
- e. If particular block(s) are not applicable, they will be marked "N/A."

D.2 COMPLETION INSTRUCTIONS

- a. The completion instructions on the reverse side of KSC Form 2 122 are applicable with the following exceptions (the differences are underlined):

Item No.	Item Title	Explanation
1.	Category	Indicate the category of the proposed change as it appears in the change package (e.g., I and II-see definitions Appendix A). If the approved category differs from the recommended category, the CCBD must be "Approved with Change Noted" in block 16.
2.	Program	Indicate the Program Milestone Milestone Event and/or Event for which the proposed change is planned, such as: CDR, LC39 Site Activation, etc.
3.	Effectivity	Enter the appropriate affectivities for which the approved change is planned, such as: Space Shuttle Flight #, Orbiters 1 through 4, etc.
5.	Implementation	Enter the appropriate organization symbol of the organization responsible for implementing the design, procurement, installation, etc. Enter the date the Modification Package is required.
6.	Level III CCB Chairman	Leave Blank.

- b. When a change exceeds Directorate (Level IV) CCB authority, the CCBD (KSC Form 2-122) must be forwarded to the applicable Program/Project CCB (Level III). In this case, the Directorate will complete the following item numbers appearing on the CCBD: 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, and 18. The following exceptions to the completion instructions appearing on the reverse side of KSC Form 2-122 are made for purposes peculiar to the Level IV submission to Level III:

1.	Page___of___	Type in Page 1 only. The total number of Pages will be completed by the Level III CCB Secretariat.
2.	Other Project	The Level IV CCB Secretariat Elements shall complete this if known; Affected otherwise, it will be completed by the Level III CCB Secretariat.
3.	Disposition/ Special Instructions/ Remarks	When the Level IV CCB disposes the Change Package to Level III for approval/disapproval, the Level IV CCB Secretariat shall type the words, "To Level III For position," adjacent to the block 16 heading. The completion of block 16 for Level III CCB dispositioned changes is the responsibility of the Level III CCB Chairman.
4.	Level IV CCB Chairman	Change Packages dispositioned to the Level III CCB by the Level IV CCB shall be signed and dated by the Level IV CCB Chairman in this block. If the package is not dispositioned by the Level IV CCB Chairman, leave blank (signature of person making disposition can be included in block 17).

APPENDIX E: REQUIREMENTS FOR PREPARATION OF TURNOVER OF O&M AND/OR SUSTAINING ENGINEERING RESPONSIBILITY FOR KSC FACILITIES, SYSTEMS, AND COLLATERAL EQUIPMENT (KSC FORM 21-136)

E.1 GENERAL

The KSC Form 21-136 (Turnover of O&M and/or Sustaining Engineering Responsibility for KSC Facilities, Systems, and Collateral Equipment) is the official document used for turnover or turn back of KSC facilities, systems, and collateral equipment O&M and/or Sustaining Engineering responsibility between the Spaceport Services Directorate and the cognizant operations directorate(s).

E.2 COMPLETION INSTRUCTIONS

Complete each block on the form as follows:

Item No.	Item Title	Explanation
1.	From	Enter name of organization from which O&M and/or sustaining engineering responsibility is being transferred.
2.	To	Enter name of organization to which O&M and/or sustaining engineering responsibility is being transferred.
3.	Contract No.	This block is used in transfers of O&M responsibility between KSC operations directorate(s) and their contractors, and for the transfer of documentation between the Spaceport Services Directorate and contractors having sustaining engineering responsibility.
4.	Procurement Contract No.	Enter as applicable, the Procurement Contract No. which provided the facility, system(s), or equipment being transferred.
5.	Project Control Number	Enter Project Control Number (PCN).
6.	Location	Enter location of facility, system(s), or equipment (LC-39A/ RSS, VAB/HB-1, CCAFS/Hangar A-E, etc.). If portable, so indicate. Primary area of usage may be noted if considered useful.
7.	Date	Enter date transfer is to take place.
8.	Facility, System, Equipment Being Transferred	Provide a complete and comprehensive list of the facility, system(s), and/or equipment being transferred. In addition, identify any unique test equipment, spares, software, etc. When a facility is being transferred, list all systems and equipment included therein such as HVAC, Potable Water, Compressed Air, GN2, High and Low Voltage Systems, Cranes, Fire Alarm, Sprinkler, Deluge, etc.

		Where applicable, provide the Program Model Number.
9.	Open Items	List all open action items that must be completed after turnover.
10.	Remarks	Self-explanatory but it is required that a statement be made concerning the type of turnover such as interim, or final.
11.	Transferred By	Enter signature, title, organization of person authorized to transfer responsibility, and date.
12.	Accepted By	Enter signature, title, and organization of person authorized to receive transfer of responsibility, and date.
13.	Documents	<p>Enter the documentation to be transmitted with turnover agreement:</p> <ul style="list-style-type: none"> a. Enter the complete document number. b. Enter the title, and when applicable the Program Model Number (PMN). c. Enter the latest issue (NEW, Rev. A, B, etc.). d. Enter an X when the document is being transferred for information only. (Certifications, warranties, contract specifications, standards, etc.). Also drawings and other engineering data when sustaining engineering will be maintained by the transmitter. e. Enter an X when sustaining engineering/record of ownership (R.O.) will be changed from/to Spaceport Services and the contractor having sustaining engineering responsibilities after acceptance of turnover.
14.	Documents Retained	<p>Enter the documentation which would normally be transmitted but is being retained such as originals requiring additional work or vendor data which has not been received. with turnover agreement:</p> <ul style="list-style-type: none"> a. Same as 13 a. b. Same as 13 b. c. Provide remarks concerning why the document is being retained and when it is planned to be transmitted, if it will be.

**APPENDIX F: REQUIREMENTS FOR PREPARATION OF TRANSFER AND/OR
NOTIFICATION OF ACCEPTANCE OF ACCOUNTABILITY OF REAL PROPERTY
(NASA FORM 1046)**

F.1 GENERAL

The NASA Form 1046 is the official document used to transfer accountability from the organization that oversees the modification or construction of new real property to the KSC Real Property Accountable Officer.

F.2 COMPLETION INSTRUCTIONS

Complete NASA Form 1046 in accordance with instructions on reverse side of form.

APPENDIX G: SPACE CLASSIFICATION CODE SUMMARY AND DEFINITIONS

<u>OFFICES</u>		<u>LABORATORY</u>	
00	OFFICE RECEPTION	10	LIFE SCIENCE
01	REGULAR OFFICE		
02	OFFICE ENTRANCE	11	ELEC/ELECTRL
03	EXECUTIVE SUITE	12	MECH/OPT/FLU
04	OFFICE CONF.	13	CHEMICAL LAB
05	OFFICE FILES	14	MEDICAL LAB
06	OFFICE SUPPORT	15	CALIBRATION
07	OFFICE BREAK AREA	16	PC SUSTAINING
08	TRANSIENT OFFICE	17	PHOTO/MULTI-MEDIA
09	VEH. FLOW OFFICE		
<u>TECHNICAL FACILITY</u>		<u>CONFERENCE</u>	
20	SHUTTLE PROC	30	REGULAR CONF
21	PAYLOAD PROC	31	CHART/PROJCT
22	DATA PROCESS	32	CLASSROOM
23	EXP VEH PROC	33	TEMP BOARD
24	CONTROL ROOM		
25	LAUNCH EQUIP		
26	FLIGHT CREW		
<u>SHOP/INDUSTRIAL</u>		<u>STORAGE</u>	
40	SHOP OFFICE	50	A/C WHSE
41	ELECTRONIC	51	NON A/C WHSE
42	ELECTRICAL	52	POL
43	FLUIDS/GASES	53	RECORD STOR
44	MECH/OPTICAL	54	ORDNANCE
45	AUTOMOTIVE	55	ORG. STORAGE
46	LIFE SUPPORT	56	HAZD WASTE
		57	OPERATIONAL
<u>MISC.INSTLN SUPT.</u>		<u>EXCLUDED SPACE</u>	
60	INST SERVICE	70	PUBLIC SPACE
61	MAT SVC CTR	71	CUSTDL/SERV
62	PUB EXHIBITS	72	TOILET
63	EMP SERVICES	73	MECH/EL/COM
64	CONST/MODS	74	UNUSABLE
65	DOCS/PUBS	75	MOTHBALLED
66	PRINT/REPRO		

SPACE CLASSIFICATION CODES DEFINITIONS

OFFICES

	<u>CODE</u>	<u>DEFINITION</u>
00	OFFICE RECEPTION	An area assigned to a person such as a receptionist, secretary, etc. not defined by hard walls or landscape partitions, which shares an assigned entrance or "circulation" space with restricted traffic flow for occupants and visitors within the office/room complex.
01	REGULAR OFFICE	Assigned space within a facility which is used in support of normal clerical, engineering or other work where persons sit at a desk to perform their job functions. Included within the area defined as office are those functions requiring space such as filing (personal or shared), computer and others which are utilized in support of the office function unless the support area is totally separated from the desk area by fixed partitions or walls.
02	OFFICE ENTRANCE	Assigned entrance or "circulation" space with restricted traffic flow for occupants and visitors within the office/room complex.
03	EXECUTIVE SUITE	Center Director, first line Directors, their Deputy Directors; Center Director and first line Director Executive Secretaries reception area and suite entry.
04	OFFICE CONF	Any conference room or area, below Sub-Directorate/Director level, being used as a conference or meeting area. This is to be considered overhead to the office function and not identified by another class-of-space designator. Exception: If integral with supervisory offices, the space is classified as REGULAR OFFICE.
05	OFFICE FILES	Common office files and document storage. This is to be considered overhead to the office function and not identified by another class-of-space designator. Exceptions: Area used for distribution, issuance or maintenance of active documents and publications. These areas are to be identified as DOCS/PUBS.
06	OFFICE SUPPORT	Support items such as copy machines, printers, computers/servers, and Fax machines located within, and supporting assigned office areas. This is to be considered overhead to the office function and not identified by another class-of-space designator.
07	OFFICE BREAK AREA	Coffee Machines, Microwaves, refrigerators, break table, etc. located within, and supporting assigned office areas. This is to be considered overhead to the office function and not identified by another class-of-space designator.
08	TRANSIENT OFFICE	Assigned space reserved for off-center TDY personnel associated with individual launch/payload activities. Includes both government and contractor requirements. Not to be used by KSC personnel requiring long term office use.
09	VEH FLOW OFFICE	Assigned space used by personnel who require temporary office space in close proximity to a KSC activity (e.g. during vehicle/payload flow). Examples are various launch pad trailers/boxcars, fall back areas, etc. At least one of the assigned flow areas within the flow path must be classified as REGULAR OFFICE (e.g. flow = OPF to VAB to PAD of which OPF is assigned as REGULAR OFFICE and the VAB and PAD is assigned as VEH FLOW OFFICE).

SPACE CLASSIFICATION CODES DEFINITIONS

LABORATORY

	<u>CODE</u>	<u>DEFINITION</u>
10	LIFE SCIENCE	Assigned space for processing, assembly, test, checkout and integration of Life Science Experiments.
11	ELEC/ELECTRL	Assigned space for electronic or electrical experimental and/or developmental testing in support of KSC requirements.
12	MECH/OPT/FLU	Assigned space for mechanical-optical- fluids experimental and/or developmental testing in support of KSC requirements.
13	CHEMICAL LAB	Assigned space for chemical experimental, and/or developmental testing in support of KSC requirements.
14	MEDICAL LAB	Assigned space for experimental tests, various medical analysis/sampling or routine medical examination in dispensary.
15	CALIBRATION	Assigned space for calibration of equipment using primary and secondary standards.
16	PC SUSTAINING	Personal Computer Hardware and Software maintenance and development.
17	PHOTO/MULTI-MEDIA	Photo work areas, dark rooms and processing areas for all types of photo services. Video taping, editing, etc.

TECHNICAL FACILITY

	<u>CODE</u>	<u>DEFINITION</u>
20	SHUTTLE PROC	High Bays, Workstands, Test Cells, Clean Rooms and work/staging areas required for assembly, test, checkout and integration operations.
21	PAYLOAD PROC	High Bays, Workstands, Test Cells, Clean Rooms and work/staging areas required for assembly, test, checkout and integration operations. Applies to Vertical, Horizontal and Automated Integrated Cargo/Payloads.
22	DATA PROCESS	Assigned space for central computer hardware, software, and dedicated input/output terminal areas. Includes tracking stations or similar operations. Does not include space associated with desktop personal computers (PC) in support of normal office functions. PC desktop space will be included as overhead to the normal office function and will be classified as REGULAR OFFICE.
23	EXP VEH PROC	High Bays, Workstands, Test Cells, Clean Rooms and work/staging required for assembly, test, checkout and integration operations. Applies to Delta and Atlas/Centaur Vehicles, and associated Payload Assist Modules (PAM's).
24	CONTROL ROOM	Space required for equipment and software in the Launch Processing System (LPS) and its subsystems, i.e., Central Data Subsystem (CDS) Checkout, Control and Monitor Subsystem (CCMS). Other Control Centers, i.e., Utility Control Center, User Rooms, Cargo Integration Test Equipment (CITE) Control, Checkout, Launch and Control System (CLCS), etc.
25	LAUNCH EQUIP	Assigned space required for launch equipment/systems such as pad Environmental Control System (ECS) rooms, High Pressure gas system, compressed air system, etc. Applies to space and shelters on launch complexes

26	FLIGHT CREW	Assigned space for quarters, clean rooms, assembly, test, checkout, repair, maintenance and storage of Flight Crew Equipment (FCE) including suits.
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CONFERENCE

	<u>CODE</u>	<u>DEFINITION</u>
30	REGULAR CONF	Assigned space for organizational or functional meetings. Does not include that meeting space integral with supervisory offices or those meeting areas assigned to organizations lower than the sub-directorate (or equivalent) level. Such space will be included as overhead to the normal office function and will be classified as OFFICE CONFERENCE.
31	CHART/PROJCT	Assigned space for use as a Chart Room, Project Control/Scheduling Room, Projection Booth/Room, etc.
32	CLASSROOM	Assigned space for training on a recurring basis and equipped with training/equipment.
33	TEMP BOARD	Office space temporarily assigned for unique use such as Procurement Source Evaluation Boards (SEB's), Source Evaluation panels, Accident Investigation Boards, and similar activities. Normally occupied by "detailed" C/S personnel. (If double-desked, exclude Head Count).

SHOP/INDUSTRIAL

	<u>CODE</u>	<u>DEFINITION</u>
40	SHOP OFFICE	Office area usually raised or partitioned, unairconditioned and used by a supervisor/lead in a shop or maintenance area.
41	ELECTRONIC	Shop area used for assembly, repair, test and checkout of electronic components and subassemblies.
42	ELECTRICAL	Shop area used for assembly, repair test and checkout of electrical/power components and subassemblies.
43	FLUIDS/GASES	Shop area used for assembly, repair test and checkout of hydraulic/pneumatic components and subassemblies.
44	MECH/OPTICAL	Shop area used for assembly, repair, test and checkout of mechanical/optical components and subassemblies.
45	AUTOMOTIVE	Shop area used for repair of automobiles, trucks, tractors, heavy equipment, etc.
46	LIFE SUPPORT	Shop area used for cleaning, repair and checkout of life support equipment such as SCAPE suits, air packs, etc.

STORAGE

	<u>CODE</u>	<u>DEFINITION</u>
50	A/C WHSE	Air-conditioned building/area used to process and store components, assemblies, systems, etc., that are currently not required for their intended use.
51	NON A/C WHSE	Rooms/areas used to process store components, assemblies, systems, etc., that are currently not required for their intended use.
52	POL	Rooms/areas used to store petroleum, oil, lubricants and other flammable substances.

53	RECORD STOR	Assigned space used to store dead records, files, magnetic tapes, drawings, and other printed matter. Does not include that space utilized for active files in support of normal office functions. Such space will be included as overhead to the normal office function and will be classified as REGULAR OFFICE.
54	ORDNANCE	Rooms/areas or bunker used to store ordnance devices.
55	ORG. STORAGE	Assigned space utilized to store equipment, materials, and other items required in the normal functioning of an organizational unit. Does not include space utilized for storage of normal office administrative supplies. Such space will be included as overhead to the normal office function and will be classified as REGULAR OFFICE.
56	HAZD WASTE	Rooms/areas designated and used for the storage of hazardous wastes. Normally a short term holding area for pickup by a hazardous waste disposal contractor.
57	OPERATIONAL	Rooms/areas used to store operational hardware, test equipment, vehicle subassemblies, spare parts, etc., associated with vehicle/payload test and checkout.

MISC. INSTLN. SUPT.

	<u>CODE</u>	<u>DEFINITION</u>
60	INST SERVICE	Space involved with direct support of KSC activities and functions, such as: fire, safety, security, mail distribution, library, archives, etc.
61	MAT SVC CTR	Areas that serve as distribution centers for the KSC supply system.
62	PUB EXHIBITS	Areas that contain exhibits such as KSC Visitors Center, and the various Concessionaire Bus Tour stops.
63	EMP SERVICES	Personnel break areas, dispensing machine areas, cafeterias, kitchens, lunch rooms, lockers and concessions such as Credit Union, Airline Ticket Offices, Barber Shop, etc. Does not include space occupied by refrigerators, coffee machines, etc. in office areas. Such space will be included as overhead to the normal office function and will be classified as OFFICE BREAK AREA.
64	CONST/MODS	Areas assigned to and controlled by the Spaceport Services construction management function during construction periods. Areas are returned to their assigned classification upon completion of modifications.
65	DOCS/PUBS	Area used for distribution, issuance or maintenance of active documents and publications. Does not include word processing or file storage space areas utilized in support of office functions. Such space will be included as overhead to the normal office function and will be classified as OFFICE FILES.
66	PRINT/REPRO	Printing plant, associated equipment rooms, and dedicated multi-user reproduction rooms. Does not include space occupied by copy machines located within the general confines of an organizational office. Such space will be included as overhead to the normal office function and will be classified as OFFICE SUPPORT.

EXCLUDED SPACE

	<u>CODE</u>	<u>DEFINITION</u>
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70	PUBLIC SPACE	Public-use areas such as halls, corridors, stair wells, elevators, lobbies, etc.
71	CUSTDL/SERV	Janitorial storage space, broom closets, sinks/scrub equipment, etc.
72	TOILET	Public sanitary facilities in buildings. Excludes private facilities assigned to authorized users.
73	MECH/EL/COM	Equipment rooms (HVAC, Boilers, Telephone terminal areas, Electrical terminal areas, OIS, OTV, Frame rooms, Patch panels) required to operate and support a building. Excludes O&M equipment rooms (Technical or Shop codes) in operations and support systems.
74	UNUSABLE	Unused due to various hazardous or Safety Constraints.
75	MOTHBALLED	Unused/unassigned facilities and physical space for which no O&M will be provided and are listed on the KSC Facility Closure and Consolidation document.